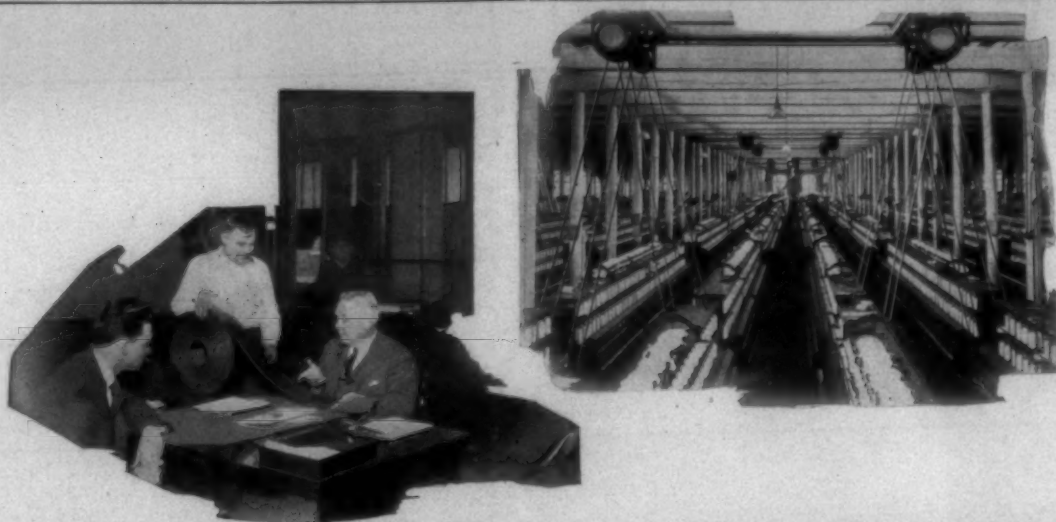


# SOUTHERN TEXTILE BULLETIN

VOL. 30

CHARLOTTE, N. C., THURSDAY, AUGUST 19, 1926

NUMBER 25



**“This leather belting will reduce your  
yearly belt bill 25% to 50%”**

**I**T will do this with any textile mill—particularly cotton mills. Will actually reduce your bill for replacement belting anywhere from 25% to 50%.

And there is good and sufficient reason why it should.

It is very much stronger—having an average of from 800 to 1,000 lbs. more strength per square inch—more than any other oak tanned, center stock leather belting. It also has much less stretch—a higher surface adhesion to the pulleys, more net weight of leather per pound, etc., etc.

By every test of belting quality—chemical tests—physical tests and actual service tests on the pulleys of cards, combers, spinning frames, warpers, etc., the belts made by the Chicago Belting Company prove to be different from and better than any other oak leather belting.

This attested to by the fact that large companies—“big business”—companies that keep close tab on their actual belting costs—are using Chicago Belting belts today because they last longer and cost less than any other belts.

Just why this is so is explained by our pre-tested method of construction—originated by the Chicago Belting Company and adopted by their plants for both the protection of their customers and to increase and continue the goodwill earned by the Company during the last thirty-seven years.

*Send your next inquiry to Chicago Belting. Use the address nearest to you.*

Branches specializing in textile belting:  
Atlanta, Georgia - - - 37 Trinity Ave.  
Boston, Mass. - - - 179 Lincoln Street

**Chicago Belting Company**

*Manufacturers of Leather Belting*  
127 NORTH GREEN STREET  
CHICAGO, U.S.A.

Branches specializing in textile belting:  
New York City - - - 75-77 Cliff Street  
New Orleans, La. - 203 South Peters St.

## Chicago Belting



# Reeds—Reeds—Reeds

15 years experience in making Loom Reeds.  
Each year some improvement. Ask almost  
any weave mill in the South. Do you use  
them?

## Charlotte Manufacturing Co.

Card Clothing and Reeds

Charlotte,

- - - - -

North Carolina



## Leatheroid

Thousands of these cans are in use in textile mills everywhere. Some are new, some have been in use for a few years and **many have been in use for from 10 to 25 years**—and furthermore with just ordinary care every Leatheroid roving can made will give the same service and satisfaction.

In circulars, catalogs and advertisements we have described Leatheroid and pointed out the advantages of Leatheroid construction—but the sum total of it all is that because of the material used and the methods of construction these cans represent the most economical purchase you can make.

Roving cans are one item in a full line of receptacles—trucks, boxes, barrels—manufactured and sold under the trade mark name—Leatheroid.

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# MATHIESON Chemicals

## Mathieson Traffic Service

THE complicated industrial structure of today has made transportation one of the foremost problems with which industry has to contend. Expert traffic counsel has become essential to the prompt and efficient handling of freight movements.

In the chemical-consuming industries in particular, where highly technical materials are dealt with, the traffic expert is indispensable. Yet the average user of chemicals is but poorly informed on traffic matters and comparatively few can afford to maintain a traffic department of their own.

It is for this reason that the Mathieson organization includes a full staff of traffic experts for the service of all customers. Questions of freight rates, routings, tracing and expediting of shipments, claims against carriers, etc., are all handled for Mathieson customers by our well organized Traffic Department. Our staff welcomes the opportunity of assisting customers with their traffic problems and is on the alert at all times for traffic changes which might affect their interests, whether or not such changes have any direct connection with Mathieson products.

Consumers should give careful consideration to the advantages of Mathieson traffic service before seeking a source of supply elsewhere.

*The* **MATHIESON ALKALI WORKS Inc.**  
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*Caustic Soda - Liquid Chlorine  
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*Soda Ash - Bleaching Powder  
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# ARCY—

A Means of Getting The  
Most Value From a  
Dollar's Worth  
of Starch

**A**RCY is a product used in warp sizing and cloth finishing for converting ordinary thick boiling pearl starch into a soluble form, the solutions of which are transparent, and remain fluid at lower temperatures.

**T**HERE are many kinds of diastases which convert starch, but which have no value in textile mill use in preparing starch mixes, because they will carry the conversion into sugars, to the utter destruction of the desirable properties of the starch. **ARCY does not contain malt diastase, nor other similar diastases which produce sugars in the size kettle.** Herein lies ARCY's extreme value to the Textile Trade.

Manufactured by

**American Rapidase Company, Inc.**

*Sole Distributors for all Southern States:*

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Norfolk

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Where interiors are painted with this—



# Washing removes the dirt but not the paint—

**T**RY to wash ordinary white paint. Does the dirt come off? Does the paint stay on?

*You can wash Barreled Sunlight clean any number of times without the least injury to its lustrous white surface.*

This is because Barreled Sunlight is so satin-smooth that dirt can find no foothold—and so durable that repeated washings will not wear it away.

Made by the exclusive Rice Process, Barreled Sunlight is guaranteed

to remain white longer than any gloss paint or enamel, domestic or foreign, applied under the same conditions—also, not to flake or scale if properly applied. It is economical in application, too, flowing on freely with brush or spray at the *lowest cost per square foot of surface covered.*

These are the practical reasons why hundreds of modern textile mills prefer Barreled Sunlight to any other paint for their ceilings and walls.

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from ½ pint to 5 gallons. Where more than one coat is required, use Barreled Sunlight Undercoat first.

For exteriors, use Rice's Reinforced Paint, a scientifically machine-made paint in pure white and unusually well-defined colors. Used by textile mills everywhere.

The coupon will bring you an illustrated booklet and a panel painted with Barreled Sunlight.

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New York—350 Madison Ave. Chicago—659 Washington Blvd.

San Francisco—156 Eddy Street

Distributors in all principal cities

# Barreled Sunlight

Reg. U. S. Pat. Off.

Save the surface and  
you save all

U. S. GUTTA PERCHA PAINT CO.,

36 Dudley Street, Providence, R. I.

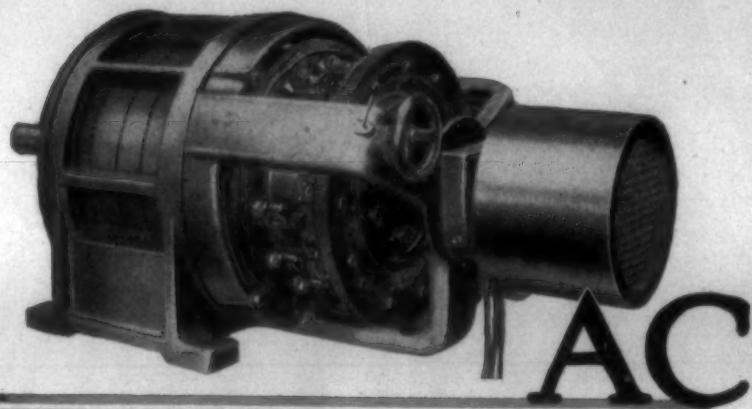
Please send us your booklet "More Light", and a panel painted with Barreled Sunlight.

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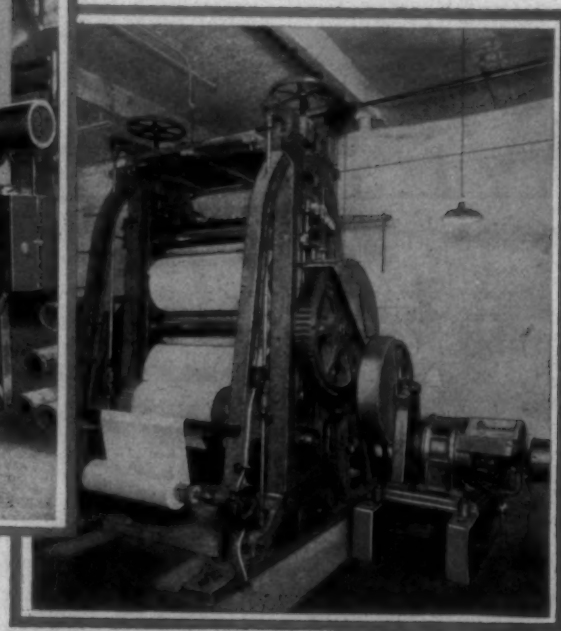
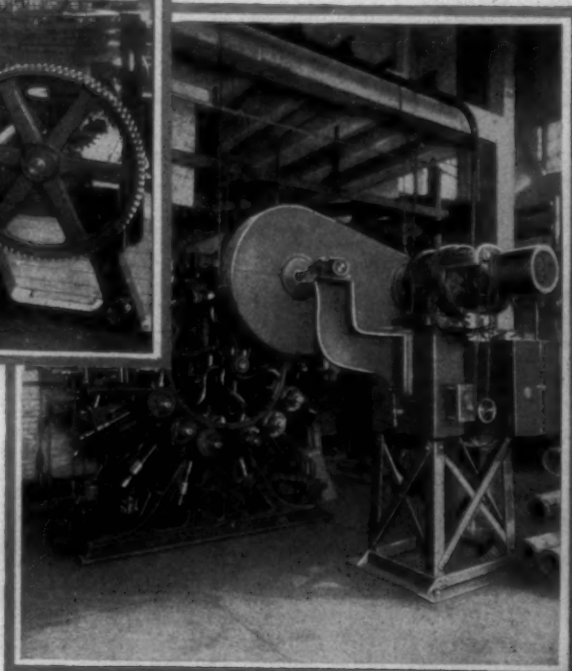
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General Electric adjustable speed a-c. or d-c. equipments permit the operation of machines in your finishing room on the *same circuit as your mill*—whether that be alternating-current or direct-current. Both a-c. and d-c. equipments have similar characteristics for the ideal drive of finishing machines—and produce the simple, convenient, economical form of motor and control application obtained with G-E Motorized Power.

The new G-E Type BTA alternating-current



When you specify G-E Motorized Power, G-E textile mill specialists study your electric drive problem, recommend the form of drive best suited, select the proper motor or motors from the extensive G-E line, select the necessary control equipment, and then see that the installation is satisfactorily made and serviced. This complete service is readily available at your nearest G-E office.



**Motorized Power**  
—fitted to every need

# GENERAL

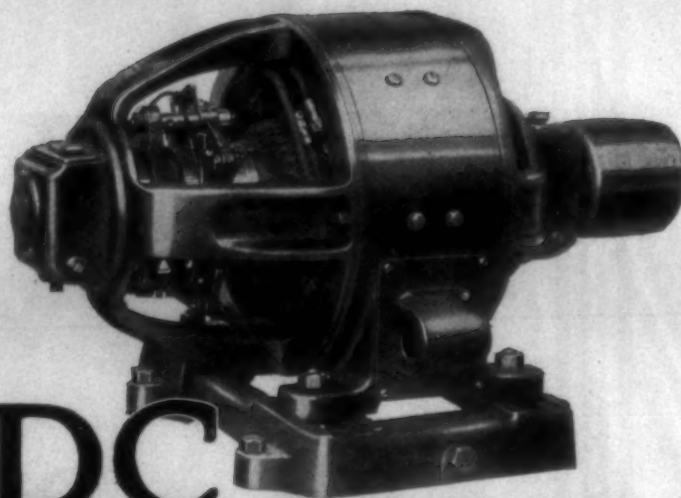
GENERAL ELECTRIC COMPANY, SCHENECTADY, NEW YORK



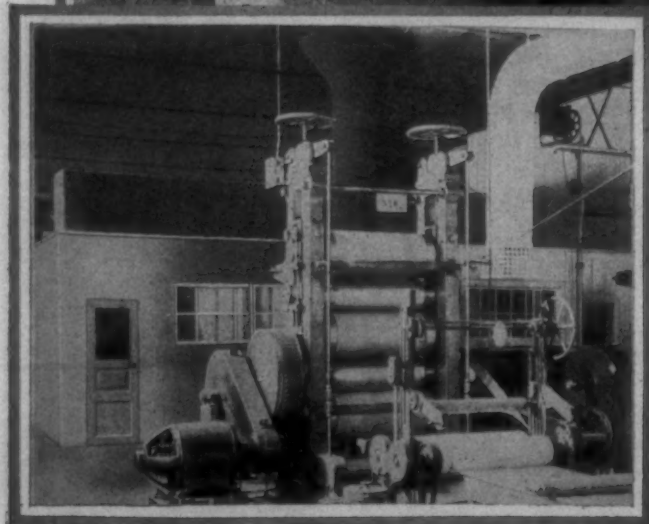
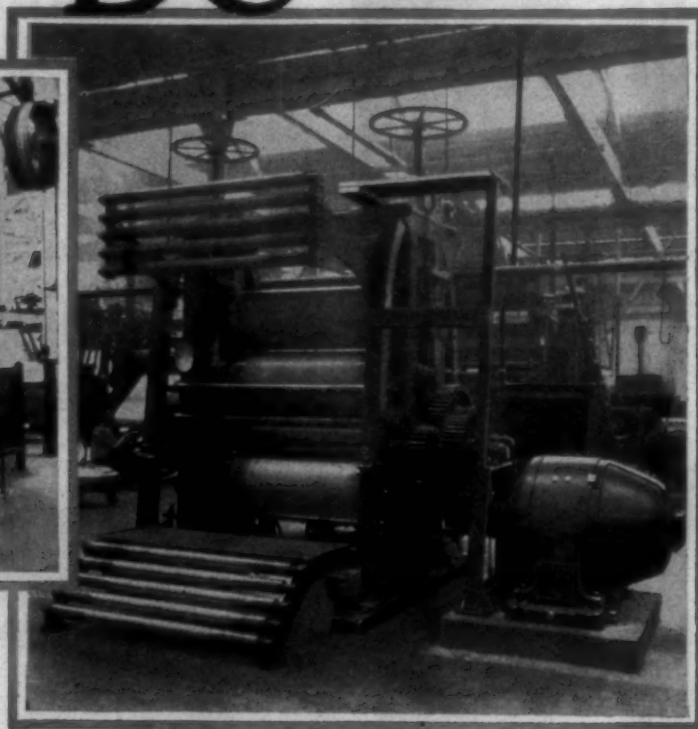
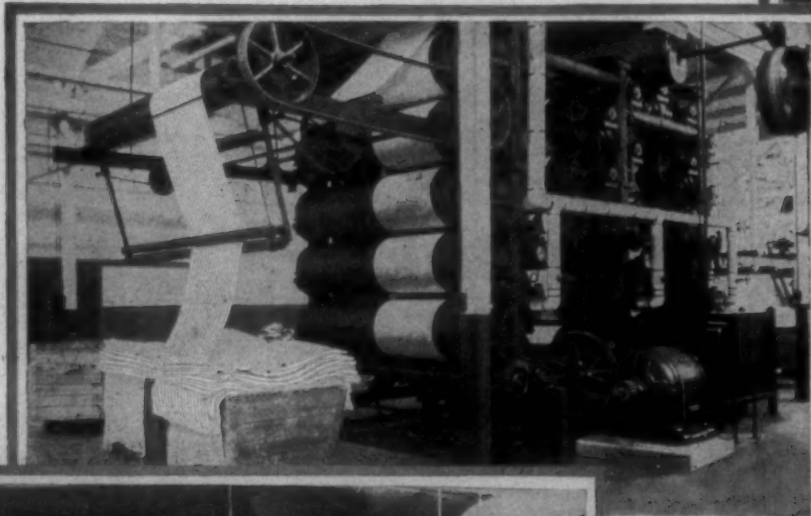
# Either Alternating- or Direct-Current

polyphase motor provides adjustable speed with shunt characteristics. This makes it unnecessary to install a motor-generator set and direct-current motors where alternating current is the primary source of power.

The BTA has a wide speed range with uniform speed change—and it is the only a-c. adjustable speed motor giving full speed range with varying loads. Semi- or full-automatic control for this motor can be furnished.



## DC



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# THE NEWPORT COLORS

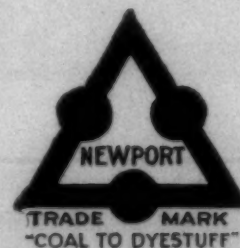
*"Coal  
to  
Dyestuff"*

## Quality Counts

You can make no mistake in  
buying Newport Quality products—

**Anthrene and Thianthrene Colors**  
**Anthraquinone Blue Black B**  
**Fast to Light Direct Colors**  
**Isomerpin--Neomerpin**  
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*Quality Service keeps pace with Quality Products*



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# SOUTHERN TEXTILE BULLETIN

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VOL. 30

CHARLOTTE, N. C., THURSDAY, AUGUST 19, 1926

NUMBER 25

## *Making, Dyeing and Finishing Worsted in the South*

THE title assigned to me for this brief talk places me in a rather peculiar position, because the Southern Worsted Corporation of Greenville, S. C., is the pioneer and only worsted mill South of the Mason-Dixon line, and anything I say regarding the manufacturing of worsteds must necessarily apply to that plant, due to its being in that singular position. We specialize in manufacturing fancy men's wear goods used by the best clothing manufacturers in the country for their popular-priced lines of suits retailing from \$25 to \$40.

Our raw material is virgin wool. In some instances we purchase the wool and have it converted into top in the East, selling our card waste and noils to woolen manufacturers in that part of the country. In this way we avoid paying freight on the noils, waste and unsalable substances that weigh from 50 to 75 per cent of the total wool purchased. Other times it is more advantageous to purchase top, especially when there are radical fluctuations in price on the downward trend. It takes considerable time to receive wool shipped from Australia and foreign countries.

Our plant is of the most modern type and is all on one floor, which avoids unnecessary handling. The building is equipped with the latest machinery for top dyeing, Vigoureux printing, melange blending, drawing, spinning, warp and filling preparation, dressing and slashing, weaving, drawing-in, burling and mending, crabbing, fulling and scouring, piece dyeing and finishing. As these many operations are equivalent to four distinct manufacturing plants, you can readily see that our modern plant and equipment, complete control of manufacturing from top to finished cloth under one roof, and only one profit, are the essentials that keep our plant humming away during these times when the industry as a whole is suffering much from depression.

### **Importance of Wool.**

Before I go further in to the details of the different operations I will endeavor to give a brief outline on wool, which is of course, the raw material from which worsteds are made. With the exception of our present depression, the world has always been wholly or partly dependent on wool for its clothing. I

Address by James H. Purdy, General Manager, Southern Worsted Corporation, before Southern Section American Association Textile Chemists and Colorists.

do not think the present depression in the woolen and worsted industry is due to lack of consumption of men's wear fabrics, but rather of dress goods made of woolsens and worsteds. The dress goods manufacturers have not been able to hold the fair sex to their idea in style or weight of fabric, and it has caused a large percentage of the dress goods looms to stand idle; consequently most of them by now have entered into the men's wear field and in bidding to get in they have caused much depression in the entire industry. However, there is much endeavor on the part of the big men in our industry to spread optimistic propaganda and help restore the weaker end to its own, and naturally when they succeed it will mean a healthier industry in both men's wear and dress goods. Personally I feel very optimistic about its future.

It is one of the oldest industries and should not suffer from any substitutes, as there is no imitation or synthetic fiber deserving the credit of being called imitation wool. As soon as the consumer is educated to know more about wool and worsted and the styling, skill, time, and many operations required, as well as the interesting history attached to it, I feel quite sure that everyone will want to own sufficient woolen and worsted garments. The industry, in short, should feel that the depression was nobody's fault but their own. The public should be proud to "pull for wool" and will find that it will protect their bodies as well as it does the sheep's. The people today want to know more about everything they purchase and are willing to pay for the knowledge and it will not cost very much per yard or garment to let them know.

### **Early History of Woolen Industry.**

Getting back again to the wool: Wool is the thick, wiry covering of the sheep. Its breeding was originally directed to improve the fineness and weight of the fleece. Merinos were used for this purpose, but such types develop small carcasses and meat of poor quality. Demand for mutton and the lack of profit in sheep raising merely for wool

caused the crossbreeding of many types to suit environments and fancy, with the object of founding the best type to give the greatest financial return to the sheep grower. The efforts have been most successful in the United States, as good mutton sheep are of first, and the quality of wool of second consideration.

The chief value of wool lies in its ability to be spun into yarn; other animals produce textile fibers, such as the goat, alpaca and camel, but for general purposes these are not nearly so useful to mankind as the wool from the sheep. Wool of Merino sheep has become the important element in the fabrics of the civilized world; and while it is true that they are a native of Spain, yet it is a historical fact that they were greatly improved by crossing with Italian sheep, which were brought into Spain during the reign of Emperor Columella. In A. D. 711 the Saracens, a prosperous people, established themselves in Spain, living in barbaric splendor and reveling in luxuries then unknown to greater Europe. Among the industries which their extravagant living fostered was the woolen industry, which increased to such an extent that in the thirteenth century there were in the small town of Seville more than 16,000 looms. A century later we find the woolen industry full established in the northwestern part of Spain and the fine cloths of Barcelona, and Tortosa and of Perpigon in France were renowned all over Europe for their excellence.

The Saracens being driven away from their Spanish strongholds, the industries they had so liberally supported vanished. It is said that Ferdinand V banished 100,000 artisans because they were Moors, and Phillip III drive out three-fourths of a million, the majority of them being weavers and their families. The busy hum of Seville's 16,000 looms were forever silenced. Many times since, Spain has endeavored to revive the industry, but without success.

The structure of the wool fiber under the microscope shows three distinct parts:

Epidermis or outer surface of fiber, consisting of a series of scales lying one upon the other, having tooth edges or serrations, which give the fiber its spinning and felting properties. Crimp of fiber also influences the spinning property.

Cortex or middle of fiber, composed of elongated cells shaped angularly. This part furnishes most of the strength and elasticity.

Medulla, the pith or core of the fiber through which it receives the juices which nourish it.

Some of its properties and characteristics:

Felting: The serrations make felting possible and it is generally brought about by milling, which causes friction, thus imparting heat and moisture; this softens the epidermis or scales.

Tensile Strength: Fairly good, but not as strong as many other fibers used in textiles.

Elasticity: More elastic than any other textile fiber.

Luster: Coarser the wool, more the luster.

Color: Varies according to the breed and the soil on which the sheep are pastured and the climatic conditions in which they are raised. There are some natural colored wools varying from tan to almost black. These wools usually bring lower prices, as their use in manufacturing is limited. This natural color is claimed to be due to pigment in the medulla or core of the fiber.

Length: The finer the wool, the shorter the fiber, which varies from one to nine inches long.

Diameter: Finer the wool, the finer will be the diameter, which varies from .00018 to .004 inches.

Softness and Pliability: Vary as do the length and diameter; the finer wools are softer.

Waviness and Crimp: Called crimp in fine wools; waviness in coarse wools.

Chemical Composition: Averages 50 per cent carbon, 7 per cent hydrogen, 18 per cent nitrogen, 22 per cent oxygen and 3 per cent sulphur.

Heat causes expansion and under high temperatures wool is made harsh, brittle and very tender. When heated to a temperature of 260 deg. Fahr. with water under pressure, and dried, it can be rubbed into powder. As a conductor of electricity and heat, wool is very poor, but is a good generator of electricity. These very properties



show that wool used as clothing holds back the heat of the body and keeps us warm.

Yolk, in the fiber before shearing or processing, serves as a protection to the fibers, preventing them from felting while on the back of the sheep.

The world's supply of sheep consists of over 200 different types and total number of sheep are estimated to be as follows:

Europe .....	175,000,000
Ainst New Zealand .....	109,000,000
Asia .....	110,000,000
Africa .....	42,000,000
North America .....	70,000,000
South America .....	51,000,000
	558,500,000

The world's consumption of wool is estimated at three billion pounds annually. Some of the principal wool markets are Boston, London, Liverpool, Sydney, Melbourne, Brisbane, Adelaide, Geelong, Wellington, Buenos Aires and Montevideo.

#### Grades of Wool.

The wool is received in bales and each fleece is rolled up into a ball tied with paper twine. This is used to prevent any unnecessary vegetable matter from becoming mixed with it, such as would come from a vegetable twine as hemp or cotton. It then goes to the wool sorting room where each fleece is sorted according to instruction, depending on count and quality desired. The longer staple wools are adapted to Bradford worsted spinning while the shorter stapled wools are

mostly used for French system. There is great variance in a fleece, the same as in the quality of mutton. The shoulder of mutton is finer in grain and more delicate than the leg and so is the wool from that part, owing to more wear and tear at the haunches than at the shoulders, for the weight is chiefly where the sheep lies down; consequently the wool there is longer and stronger. If the wool were as long about the neck as at the tail the sheep would not get through hedges and briars, and it would also be weighted down while eating, therefore, nature provides that the wool shall be short and fine, just enough to keep the animal warm. The wool on the back becomes rough and thin, being most exposed to the rain, and because it naturally divides down the ridges of the back, it falls down the sides.

The range of qualities are not the same in sheep with fine wool as in those of stronger breeds. The different breeds of sheep may be well compared to the keyboard of a piano; each sheep has its octave of qualities but the octave of the Merino sheep is very high while that of the Lincolnshire is very low. The sorter is furnished a number of baskets equal to the number of sorts or qualities he has to make and then spreading half a fleece on the floor before him he proceeds to clip off all pieces of tar, dried dirt, etc., and then separate the fleece into its different qualities. A perfect knowledge of these sorts can only be gained by years experience, but when

once acquired the sorter knows as well by his hands as by his eyes where shall divide the fleece, for it is not merely the coarse and fine fiber that guides him but also the "soft" and "kind handle" as it is called.

#### Wool Washing.

The impurities in wool may be classed as: First, Yolk or wool fat; second, suint or sheep perspiration; third, dirt. Yolk is insoluble in water but soluble in volatile solvent, e. g., benzine, ether, carbon bisulphide. Yolk does not (like ordinary fats) form soluble soaps with alkalies but emulsifies and on this property is based the usual scouring processes. Suint consists of potash salt of certain acids that are soluble in water. Hence steeping removes the suint. There are three general methods of treating the wool:

A. By dissolving the yolk with a volatile solvent and washing with warm water to remove the suint.

B. By scouring with alkaline agents.

C. By steeping to remove the suint and scouring afterwards to remove the yolk.

Some wools shrink as much as 70 to 75 per cent in scouring. Wool scouring is a very important operation and great care must be exercised at all times so as not to over-treat the wool while trying to thoroughly cleanse it. A sample of properly washed wool from each bowl is put at each nip for comparison to enable the scourer to keep up to the required standard of work. Soap

and alkali must be added methodically and carefully so as to keep regular strength in the bath. It is very important that all alkali is removed before drying because as it becomes more concentrated and hotter it damages the fiber. Over-heating of wool causes loss of strength, color and handle, even below 212 deg. Fahr., and decomposes at 260 deg. Fahr.

#### Carding and Combing.

From the scoured wool bins it is trucked to the card room where it is fed to a carding machine which consists of a number of cylinders of varying diameters and speeds running in opposite directions. This process is the first to open the fiber and throw out foreign matter and partially lay the fiber in parallel form. The by-product of the wool made during this operation can be used in making woolen yarn. The wool, now in the form of card sliver, is run through a gill box which straightens and draws out the fiber. These balls of sliver are then set up in back of a doubler or punch box and prepared in large balls consisting usually of four ends so they can be placed more conveniently into a revolving rack on the comb. The Noble comb is used in Bradford spinning. This comb consists of one large revolving circle set with upright pins and two small circles inside the larger one placed opposite each other so as to nearly touch the larger circle. The operation of the comb as indicated by its name is to straighten and comb out the shorter fibers from the continuous



## Staley Textile Starches

*Modified and Standardized for specific requirements*

STALEY'S ECLIPSE MILL STARCHES	Thin-boiling Starches for Warp-Sizing and Finishing.
STALEY'S RADIO MILL STARCH	For Heavy Sizing and Stiff Finishing.
STALEY'S ANCHOR PEARL STARCH	Thick-boiling Starch, re-washed and re-bolted for Sizing and Finishing.
STALEY'S STAYCO GUM	For Bright Colored Warps or Fabrics, Rayon and Special Finishes.
TEXTILE CORN SYRUP	For Khaki, or White Goods.

*Note: Our textile service men are available subject to your call to assist in your problems*

**A. E. Staley Manufacturing Company, Decatur, Illinois**

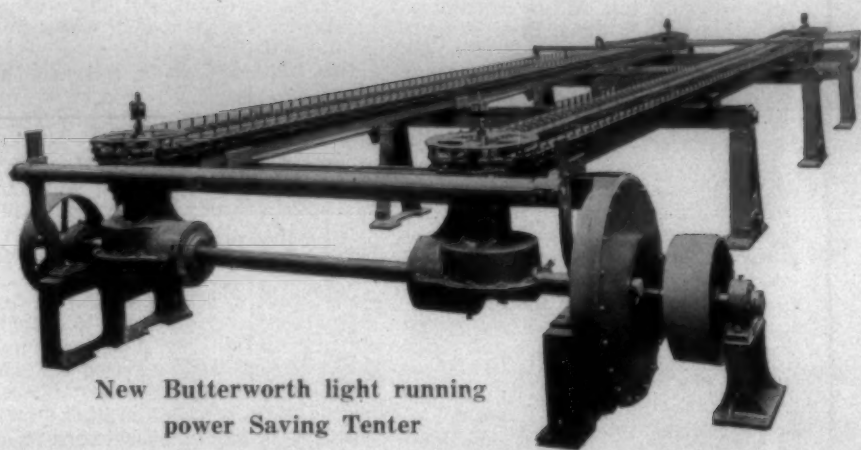
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# BUTTERWORTH

## SERVICE MACHINES



New Butterworth light running  
power Saving Tenter

In two Butterworth machines recently announced—one a Tenter and the other a Jigger—you can see the development work that is constantly being carried on in the Butterworth plant.

The new Tenter is extremely light-running, being ball and roller bearing throughout and is especially designed for medium and light fabrics.

The Jigger is now our standard type for light work. All the interior metal fittings are monel—monel cap on the journals, supports are monel-mounted, outlet and plug are monel. When desired wood-tub lined with monel and monel immersion rolls will be furnished.

In the jigger which we show here, the box is of soapstone, joints are filled with cement which sets as hard as the stone itself. The bearings of the immersed rolls are supported from the cast iron frame. There are no holes in the soapstone and the box can be readily changed.

The beam rolls are 6½" to 7" rubber-covered, and run on ball bearings—the immersion rolls run on graphite rubber bearings. All gears are cut.

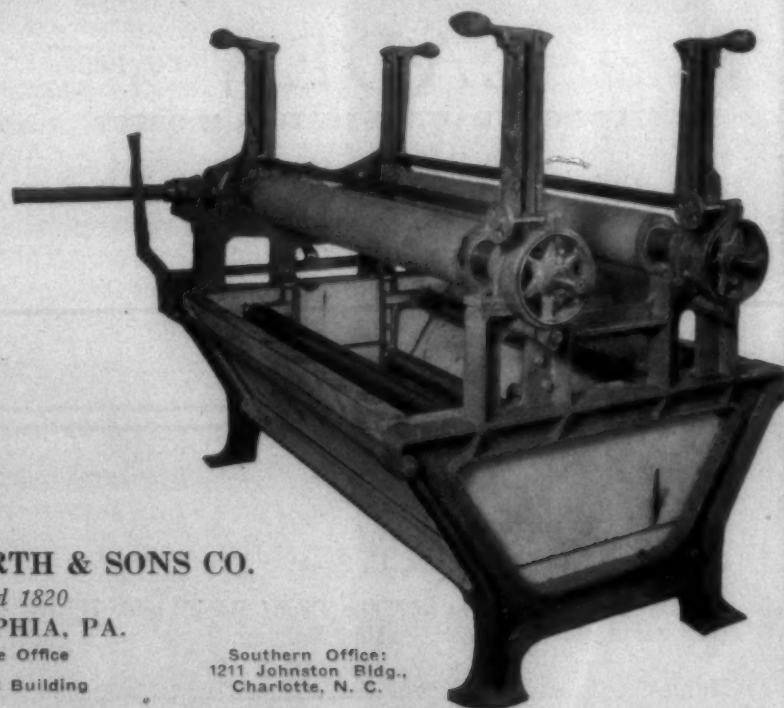
Service *after* you purchase one or an entire range of Butterworth Machines is only half the story of Butterworth Service. The other half comes *before* you purchase the machines.

The Butterworth organization is equipped to relieve you entirely of all worry and detail relative to laying out your process, the selection of the best machines for the work they will be called upon to perform, the installation of this machinery and working all of its line-up to the yardage and quality promised.

After this comes Butterworth Service to our machinery itself.

To concerns who did not know until now that Butterworth Service was so complete, we extend an invitation to consult with us on any of *your* problems. This same invitation is, of course, extended to the many concerns who have before made use of Butterworth Service.

New Butterworth Standard Type  
Jigger for light work



H. W. BUTTERWORTH & SONS CO.

Established 1820

PHILADELPHIA, PA.

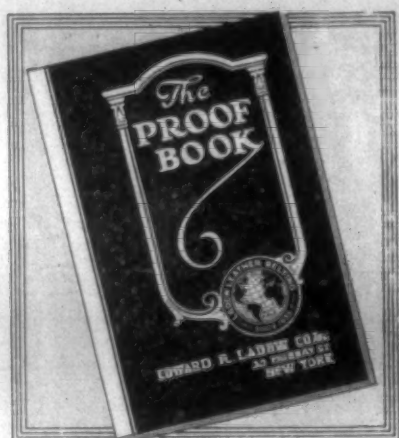
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Turks Head Building

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W. J. Westaway Company  
Hamilton, Ontario, Canada

Southern Office:  
1211 Johnston Bldg.,  
Charlotte, N. C.

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Send for a copy.

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BELTING AND OTHER LEATHER PRODUCTS

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29 Murray St., New York, U. S. A.

Please send me a copy of "The Proof Book" and full information about Ladew Leather Belting.

Name \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

strand of long fibers, producing what is called top. The shorter fibers are known as noils and are of great value in the manufacture of woolen yarns.

#### Dyeing.

The top is now ready to enter the dyehouse to be dyed or printed a shade according to the mixture it is intended for. Most of our mixtures are composed of 5 to 7 entirely different colors. Each individual shade used to make these compound mixtures must previously have passed through our laboratory for tests from practical-size dyeings before ever going into merchandise. It is important that they remain bright in all kinds of weather and sunlight. The test for this is thirty days' exposure of a sample on the roof. The must also prove their fastness to crabbing, scouring, milling, potting, perspiration, etc. These tests are many and severe but we make a practice of purchasing the best dyestuffs obtainable, regardless of price, because if the color does not hold up, a hundred other operations before and up to the manufactured garment are all sacrificed. Poor dyestuffs are not economical, no matter how cheap.

For top dyeing our tops are wound on springs and placed in the latest type Franklin top dyeing machines. The machine is filled with water and brought to a boil and the required amount of dyestuff and chemicals placed in a receiving tank and pumped through the top from the outside in seven minutes and from inside out in seven minutes alternately until the required shade is properly developed. You can depend on this type machine giving two sets in a 10-hour day on fast chrome colors such as we use. The machine is easily unloaded and the top is then ready for backwashing.

The backwashers consist of four bowls for soap application and rinsing, passing through a dryer on an apron. This dryer is heated with coils and equipped with fans that force a perfect circulation of fresh warm air and so regulated as to prevent too rapid drying, leaving enough moisture therein to prevent losing any of the "kind handle" which the wool naturally has. Coming from the dryer it passes through a balling gill box which consists of two sets of rollers with a series of pinned steel bars working between. These bars are termed fallers. The back rollers bring the material fed between two conveying aprons slowly into the machine. Emerging from the back rollers the material is pierced by the fallers, which are working at a greater speed, and is combed or opened by them. It is soon released by the back rollers and then carried forward in the fallers to the more quickly revolving front rollers. By these it is drawn continually through the fallers, this time at the opposite end of the staple and is conducted out of the gill box.

All dyeings of the same color are blended, making a solid blend of the entire lot. These tops of different shades are then set up according to the percentages required to make the desired ground shade and are recombed to remove any fibers matted or crossed during the dyeing

and previous operations after the first combing. They are then set up from cans to a French intersecting Melange gill box composed of four heads, ten slivers to each head, coming off into one sliver, making the most thorough mixing possible. When used in this manner it is possible to mix the most contrasting shades and variety, which shows its value in the evenness of the fabric.

#### Vigoureux Printing.

Going back to the dyehouse, there is another interesting process called Vigoureux printing, which consists of applying color by printing arranged on a gill box. The fibers are drawn out in a wide sheet and pass through two rollers; the lower roller is covered with felt and the upper is engraved crosswise or crisscross so as to apply any given percentage of color. You must have a different engraved roll for each percentage. The dyestuff must be specially prepared with such ingredients to form a paste that will carry the dye and chemicals with such consistency as to enable the rolls to properly print the fibres. After the sliver is printed it is folded automatically on cloths of open construction and then tied up and placed in a large steam box. These bundles are arranged on top of each other and compressed between so as to prevent air spaces. When properly filled the lid is released and the wool is totally enclosed. Steam of proper pressure is then forced from the bottom up, passing through each fibre for a period of time and then the wool is lifted out and opened for the same periods for oxidation. This is repeated until the color is properly fixed and developed in the fiber so as to stand the necessary tests as required by our other colors.

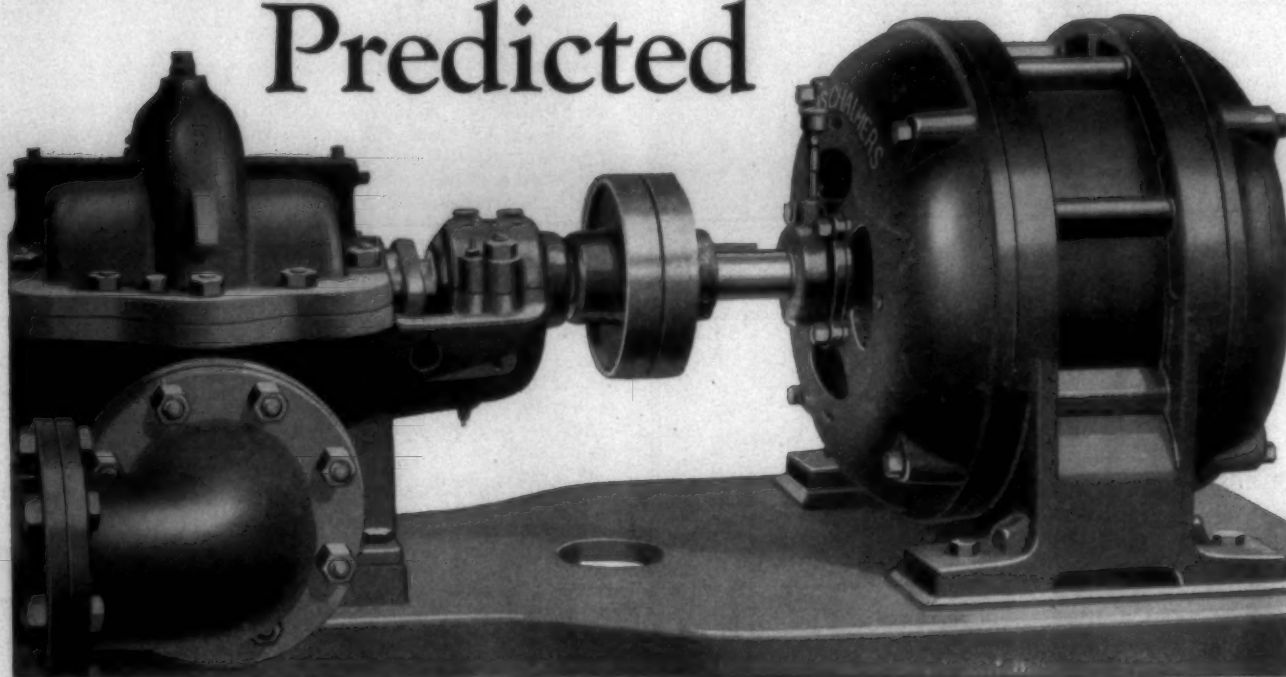
Compound prints, blended with other colors give very desirable effects. These tops are then rinsed before backwashing and undergo the same treatment as the colored tops previously mentioned. The Vigoureux and colors are now completely blended and prepared for the drawing. This arrangement is very simple but requires constant supervision. It is merely to reduce a thick sliver, then a number of slivers of wool, down to one so small that it can be spun into a thread without an excessive draft and at the same time leave it so that the thread will be all one thickness. This is done and can only be done by a pair of back rollers revolving slowly, drawing the wool in and feeding a pair of front rollers which revolve quickly and draw the wool out. The operation is repeated for a number of doublings until the wool is brought down to a small diameter, weighing a required number of grains per yard, and is called roving. All sorts of drawing do this, but there are differences in the methods and other details.

The object aimed at in worsted spinning is the production of a regular yarn from the roving supplied, of a desired thickness or count and of requisite strength, handle and appearance, and next, the winding of this yarn in a convenient form for preparation.

The spinning machines draft the  
(Continued on Page 40)



## Your Savings Predicted



*Allis-Chalmers 20 H. P. Type  
AR Timken-equipped Motor  
coupled to Allis-Chalmers  
Centrifugal Pump.*

Less wattage or more gallons is the traditional record of Allis-Chalmers motors on pump drives. Always where motor operation must be infallible, Allis-Chalmers thoroughness shows its full worth.

Electric steel for frames and spiders makes A-C motors shock-proof and distortionless, without excess bulk. Silver-brazing makes A-C rotors normally indestructible. The insulation, the ventilation, the unit-locking of the laminations and all other factors have been carried to matchless proficiency by the many individual A-C features.

Equally advanced in its anti-friction models, Allis-Chalmers provides Timken Tapered Roller Bearings. Their greater load area and thrust capacity shortens shafts an average of 15%; multiplies rigidity, and simplifies design. Lubricated a very few times yearly at most, Timken Bearings permanently maintain the closest gap.

In any type, in any service, Allis-Chalmers motors have piled up authoritative figures which closely predict the savings they can make for you.

ALLIS-CHALMERS MANUFACTURING CO., MILWAUKEE

*District Sales Offices in all Principal Cities*

# ALLIS-CHALMERS MOTORS

# COTTON MACHINERY

## Duplex Carding Device

(HARDMAN'S PATENT)

Can Be Applied to Any Make of Revolving  
Flat Card

The object of this appliance is to remove motes, leaf, short fibres and foreign substances from the cotton before it reaches the Cylinder and Flat Clothing.

The removal of these foreign substances from the cotton before it reaches the Cylinder and Flats increases the life of the Card Clothing.

The Cylinder, Doffer and Flat strips taken from a Card which has this Duplex Device applied can be put back into the regular mixing.

This Device has no high speed parts to wear, it is simple in construction and operation, and consequently requires very little attention.

Write for special Bulletin.

# Its

*Simplicity will appeal to you.  
Durability will impress you.  
Results will convince you.*

Over 5000 of these Devices are in  
Successful Operation

*Sole Licensees*

## H & B American Machine Co.

Pawtucket, R. I.

Southern Office

814-816 Atlanta Trust Co. Bldg.

Atlanta, Ga.

## Marshall Urges Cooperation

IN an address before the Commercial Secretaries of the Carolinas, Hunter Marshall, Jr., secretary of the Cotton Manufacturers Association of North Carolina, showed the necessity of cooperation in the textile industry has grown in the of the recently organized Cotton-Textile Institute.

Mr Marshall described how the textile industry has grown in the Carolinas during less than a generation from a few mills scattered here and there to more than 600 mills, operating more than 10,000,000 spindles, which is more than one-fourth of all the spindles in America.

The task of the industrial pioneers, whose efforts have resulted in the establishment of this, the greatest of our industries, was the greater because they had to overcome the handicap imposed by the devastation following the Civil war, the natural bent of Carolinians for agriculture, and their own inexperience in manufacturing and merchandising.

"To the present moment," declared Mr. Marshall, "the textile industry has developed in the Carolinas as individual units, but today we are faced with the necessity of united action. As a manufacturer recently stated, we must solve the problem of 'cooperation, coordination, stabilization.' This can only be accomplished through proper organization.

In the language of Mr. James A. Amory, general counsel of the National Association of Manufacturers, we note that, 'organization itself has been the most tremendous thing of popular benefit that has been developed in the course of modern life. Unless a man knows the facts about his own business, how shall he determine the character and amount of production? Unless he knows what his contribution is, how can he determine the necessity of refashioning the character of his own product? Is he to engage in blind and ignorant competition, or intelligent competition, the purpose of which is to find his own place in serving the society of which he is a part? The one invites unintelligence, confusion and destructive competition; the other invites intelligent and highly contributory competition.'

"The fact is that the textile industry has outgrown its distributive system. Mills are trying to dispose of their goods by the same means that they used 10, 15 and 20 years ago, and the system will not work.

"Overproduction is the danger that threatens the cotton manufacturers. And yet, is it really overproduction or merely underdevelopment of the market. Is it the failure of the distributive system to operate the mills and causing market stagnation which ought not to exist? Few can tell. At present we have no means of studying the problem or of getting at the real cause, or of finding a genuine solution of the problem.

"The export problem is another that demands our closest attention. "Advertising is a thrift problem confronting the industry. In every

other line of endeavor advertising plays an important—you might say a fundamental—part.

"What the industry needs is cooperative effort under a centralized authority and direction which will insure careful research and study of the problems confronting it, definite experimentation to cover the lines developed by the research and experiments of the industry as a whole.

"It has become the general public opinion among the leaders of the industry that something must be done to correct the existing condition. To this end a committee representing the best brains of the industry throughout the East and the South has spent month working on a plan that would be feasible. As a result of their labor and efforts the Cotton-Textile Institute was developed and organized at a meeting held in New York on July 20.

"The Cotton-Textile Institute is national in its scope and was created for the purpose of promoting 'the progress and development of the cotton industry.' Its activities shall be economic in character, and shall include trade research, the study of commercial problems, and preparation for the mobilization of the industry in national emergencies.

"Although less than 30 days old, the Cotton-Textile Institute numbers among its membership over 18,000,000 spindles, or more than 50 per cent of the spindles in the United States.

"If there is any virtue in the fact that the Cotton-Textile Institute was a creation of the outstanding men of the industry; was immediately endorsed by more than 50 per cent of the industry; is adding members at the rate of several hundred thousand spindles per day; is in line with similar organizations in other great industries, then it deserves the profound consideration of every person who is either directly or indirectly interested in the textile industry and the tens of thousands of persons who are directly or indirectly interested in it.

"It is, therefore, opportune that we appeal to the commercial secretaries of the Carolinas and solicit their efforts in putting this, the biggest opportunity that industry has had, over to its final goal.

"Time does not permit us to give all the ramifications and possibilities where in the commercial organizations may lend their assistance, but suffice it to offer one suggestion. Some of us may be able to assist in the advertising of cotton goods. We may even assist in research tending to promote the use of cotton, but above all, the commercial and civic organizations of this section can assist in creating public sentiment that will stimulate the use of the commodity of our own idea to be emphasized in this connection is that the sentiment should first be created in the individual. Do not preach to the other man, but do it yourself. The proclamation of State governors and the endorsement of commercial bodies is all right, but let's hold before us the onethought—'Let it begin on me.'



# RAYON

## RAYON

Wound for All Types  
of  
Textile Products

**W**HEREVER Rayon is used in the manufacture of textile products, Universal Wound Packages are acknowledged to be the practical, economical supply.

If your process uses Rayon in package form,—cones or bobbins for knitting, bobbins or cops for broad loom weaving, tubes for insulating or cops for braiding, Universal Winding offers greater efficiency and economy both in the winding process and in the use of the wound package as the supply for your machine.

We are proving this daily in actual mill operations.

### UNIVERSAL WINDING COMPANY

Providence.  
Chicago.  
Utica.  
New York.

**BOSTON**  
Canadian Representatives  
W. J. Westaway Co. Ltd.  
Montreal Que. and Hamilton Ont.

Philadelphia.  
Springfield.  
Charlotte.  
Atlanta

DEPOTS AND OFFICES AT MANCHESTER AND PARIS



## UNIVERSAL WINDING

**PERKINS  
Practical  
Brush**

*Renew  
Worn-out  
Brushes*

The best of brushes have their limitations. With hard and constant use they are bound to wear in time.

If there is a cylinder or block brush in your mill that needs re-filling or re-bristing—send it along to our Brush Reconstruction Department.

Our skilled repairmen can re-new worn brushes of any make or kind and follow the same method used by the manufacturer.

And our mechanical facilities are such that we can show plenty of speed on repair jobs without lowering the quality of our work.

*[Like the famous Perkin's Brushes—  
every repair job is guaranteed!]*

*Brush Reconstruction Department*

**Atlanta Brush Co.**  
**Atlanta, Ga.**

**Guaranteed  
Textile  
Brushes**

## COLORED COTTON YARNS

4s to 20s single and ply, hosiery and warp twist, direct and sulphur colors in blends, solid colors, heather mixtures, black and white twists, etc.

**OF THE HIGHEST QUALITY**

*manufactured by*

**Lavonia Cotton Manufacturing Co.**  
**LAVONIA, GEORGIA**

## Successful American Salesmanship

By Julius Klein, Director, Bureau of Foreign and Domestic Commerce.

THE fiscal year just closed brought once more into striking relief the rapid growth in American exports of manufactured goods, and the immense importance of foreign sales of this class as a stabilizer in our total foreign trade as well as in our domestic industry.

Exports of finished manufactures increased as compared with the preceding fiscal year by no less than 16 per cent. They were 60 per cent greater than in 1921-22—only four years back. They were nearly three times as great in value as in the five year period before the War. Even after allowing for higher prices they were more than double the pre-war average.

This tremendous growth reflects the rising efficiency of American industry and the energy and intelligence of American salesmanship in foreign markets.

The American manufacturer has evidently disposed of sundry tattered scare-crows which used to startle his timid predecessors as they ventured along the strange paths of export. He no longer turns back at vague warnings regarding "slipshod American packing," "inadequate credits," "inexperienced export technique," "or foreign trade financing."

These threadbare bugaboos have been most effectively dispelled by the uninterrupted expansion of the overseas markets for our manufacturers. Regardless of depreciated European currencies and low wages—in fact, partly because of the low standards of living which they imply—the intelligence and resourceful adaptability of the American manufacturer, backed by a firm policy as to quality in goods and services as against cut prices, have made a place overseas for American fabricated wares which bids fair to continue its steady growth.

The figures cited below indicate plainly that instead of timorous compliance with every inspired, ulterior demand, our manufacturers, while evidently meeting every proper requirement, are making most effective efforts to raise the standards of living of foreign customers, to stimulate new desires which can best be met by the specialties of American industry.

Quite evidently the manufacturing exporter is making rapid headway with such troublesome problems as the selection of adequate agents abroad, the planning of specialized advertising campaigns through the aid of export advertising experts, and the skilled analysis of foreign markets—these details are now giving him quite as much concern in his foreign plans as they have long commanded in domestic trade.

The rapidity of this progress in our manufactured exports should certainly not stimulate any smug complacency on our part. Success in foreign trade has always been contingent upon resourceful vigilance and with the continued eco-

nomie uncertainties of Europe and in view of their far flung reactions, this is emphatically the time for alert watchfulness on the part of our merchants and manufacturers.

Nor can it be said that we are simply filling the vacancy left by the continued absence of European wares from certain overseas markets. Our leading European rivals are making rapid strides in the recovery of their overseas trade and an analysis of these figures for 1925-26 will show that there is comparatively little in our progress which is likely to impede their own.

Ours is very largely a trade in products which are either based upon our predominance in necessary raw material supplies or in the production of certain specialties of types and grade distinctly different from those which could be shipped abroad in any quantity even by a restored Europe.

Far from menacing the future of our manufactured exports there is absolutely no question but that the recovery of Europe implies several vital economic elements in favor of our trade in fabricated wares. A careful analysis of the experience of our exports of these lines during the last six years in certain selected markets in the Far East and Latin America brings out clearly the fact that the expansion of these particular outlets varies directly with the growth of the European demand for raw materials produced in those countries. For example, our sales of automobiles in the Argentine, which in 1925 amounted to \$30,057,958, have been directly stimulated by the steady recovery of European demand for Argentine meat, wool, and cereals.

As has been frequently pointed out, there will, of course, be some rivalry between American and European manufacturers. This is already evident in textiles and in some lines of iron and steel products, but the actually competitive items among these represent a relatively small percentage of our total fabricated exports. And even within these groups there are various grade which are by no means in conflict. For instance, England's exports of cotton have practically reached their pre-war quantities in several Latin American countries but this has by no means prevented the doubling and even trebling of our textile sales in those same markets because of the growth of an entirely new demand for specialized American qualities and lines.

In other words, many of these overseas markets have vast possibilities for the expansion of their purchasing power, with consequent increasing demand for the latest manufactured specialties. That expansion assures room for any traders from either side of the Atlantic who are in a position to meet satisfactorily these new needs. International trade in manufactures today by no means involves the old

(Continued on Page 36)



# ***Does Profit Rest in your Equipment?***

# ***Yes!***

**T**EXTILE manufacturers know the operating losses due to quick wear and depreciation—and are quick to see the advantages of such an ideal metal as Mond Seventy.

An alloy of high nickel content—uniform and exact, Mond Seventy is the correct metal for use in dyeing machines, vats, jigs, utensils, tanks, etc.—everywhere that dyes or acids are encountered.

This metal assures long life, freedom from rapid depreciation and equipment that assures true shades, quick color changes—low maintenance.

Specify Mond Seventy—it is the one ideal metal for textile equipment—and will make possible definite economies.

**American Nickel Corporation**  
Clearfield, Penna.

# ***MOND 70***

## ***A HIGH NICKEL ALLOY***

A UNIFORM, COMPLETE ALLOY OF HIGH NICKEL CONTENT, MADE UNDER RIGID LABORATORY CONTROL.



## Keeping Up With Progress

**JACQUES WOLF & CO.** anticipates developments in the textile and allied industries.

Our laboratory service and technical research are at the command of manufacturers. Let us help you with your problems.

**JACQUES WOLF & Co.**  
MANUFACTURING CHEMISTS AND IMPORTERS  
PASSAIC, N. J.



Plant of Jacques Wolf & Co., Passaic, N. J.

Mid-West and Pacific Coast Representatives

**The Ciba Co., Inc.**

Chicago, Ill.

San Francisco, Cal.

## A Survey of Fall River

(The following report of Fall River, Mass., the largest cotton manufacturing town in the United States, is reprinted from "A survey of New England" now appearing in the Boston News Bureau.)

At the neighboring city of New Bedford cotton manufacturing succeeded a former dominant industry, that of whaling, but a Fall River it developed early as the city's major industrial activity. In 1811 was constructed Fall River's first cotton mill; this is still standing. Several small mills were established within Bruckhams, in the Textile Manu- a few years hereafter, one of which was to become Pocasset Manufacturing Company. In 1846 the first of the large mills was constructed by the Pocasset company, and in 1859 the Union Mill was established, the first to be financed by stock publicly subscribed. In 1871-72 fifteen new corporations were formed, and in subsequent years the industry grew rapidly at about the same time as New Bedford's first large expansion took place.

Today Fall River has more spindles than any other city in the United States, some 4,000,000. Like New Bedford, it is essentially a city of cotton manufacturing, to which is devoted 70 per cent or more of its manufacturing activity, but chiefly because of sufficient water supply its textile development has been somewhat more rounded than that at New Bedford. There are around 35 major cotton mills, operating principally on print cloths and plain goods, but on some fine constructions.

There is also at Fall River the large American Printing Company with 350,000 spindles, 8,000 looms and 42 printing machines, all capable of producing 3,000,000 yards of cloth a week and printing 6,000,000 yards. Algonquin Printing Company

centers. This is because the South has developed particularly the coarse and plain types in which Fall River has long specialized. In view of longer hours lower wages and lower taxes, the South today can turn out most of the goods produced at Fall River at a lower price than can the Northern city.

At the present time Fall River's mill machinery is running at about 60 per cent of capacity operation. When checked very recently, American Printing Company, the largest unit, had 1,200 narrow looms shut down, but was operating its wide looms overtime and its spinning departments nearly full. Present operations for the city as a whole are better than the level of 50 per cent or below which prevailed much of the past two years, and the feeling at Fall River is that demand is swinging towards plain goods.

Disregarding variations in money values, an extent of the change in Fall River's status from that of war time, when the mills were urged constantly to push out more and more cloth to be sold to the government at attractive prices, to the present, may be had from the fact that the value of Fall River's manufactured cotton output was \$61,000,000 in 1924 against \$118,000,000 in 1918. In the 1920 boom year Fall River turned out almost \$150,000,000 worth of cotton goods. Around 20,000 workers 20,000 workers are now given employment at Fall River's cotton mills, against over 30,000 within a very few years.

Following table shows progress of the cotton manufacturing industry at Fall River during and after the war, with respective columns showing cost of materials used, value of cotton goods produced, total wages paid, average number of cotton mill operatives and dividends.

	Mat. used	Val. of prods.	Wages	No. wage earners	Dividends
1924	\$36,961,765	\$60,932,713	\$18,980,407	20,585	\$2,271,450
1923	55,007,769	100,875,526	28,618,736	30,774	3,491,544
1922	48,797,115	91,752,556	28,214,713	31,422	3,605,300
1921	32,748,550	67,860,657	24,242,106	28,454	3,094,375
1920	79,143,049	149,223,703	31,002,421	29,102	11,095,800
1919	80,307,943	135,783,717	25,997,741	31,805	4,935,145
1918	67,052,882	118,376,983	20,252,789	26,814	6,146,286
1917	55,849,860	92,143,372	18,581,436	30,782	4,331,361
1916	37,379,743	65,374,214	15,725,973	31,027	2,373,494
1915	24,643,683	45,392,734	13,707,868	30,680	1,145,159
1914	29,355,913	49,516,027	13,081,876	30,427	1,225,793

is a Fall River. Unlike New Bedford, Fall River has a large bleachery and also linen and thread companies. Relatively small concerns manufacture a wide line of heavy supplies, and others manufacture narrow tapes, flat twines, laces, etc. Several mills use rayon, and there are six small silk weaving plants.

Only a few mills manufacture tire cord at Fall River, but there is the large Firestone Tire & Rubber Company plant, formerly the Sanford Spinning Company. This mill has been operated for some time day and night, uses 900 Egyptian and 1,500 American cotton bales a month and has a payroll over \$1,000,000 a year, making the company one of the most important in Fall River.

It is at Fall River that effects of the relatively new Southern competition have fallen most heavily among New England manufacturing

conditions which since the war has worked to the disadvantage of Fall River, it may be asked what reasons there are for the depression now prevailing at Fall River,—for the present situation there can hardly be couched in less positive terms. There is one distinctive fact concerning Fall River, its comparative isolation, and this is spoken of in certain quarters as of great importance.

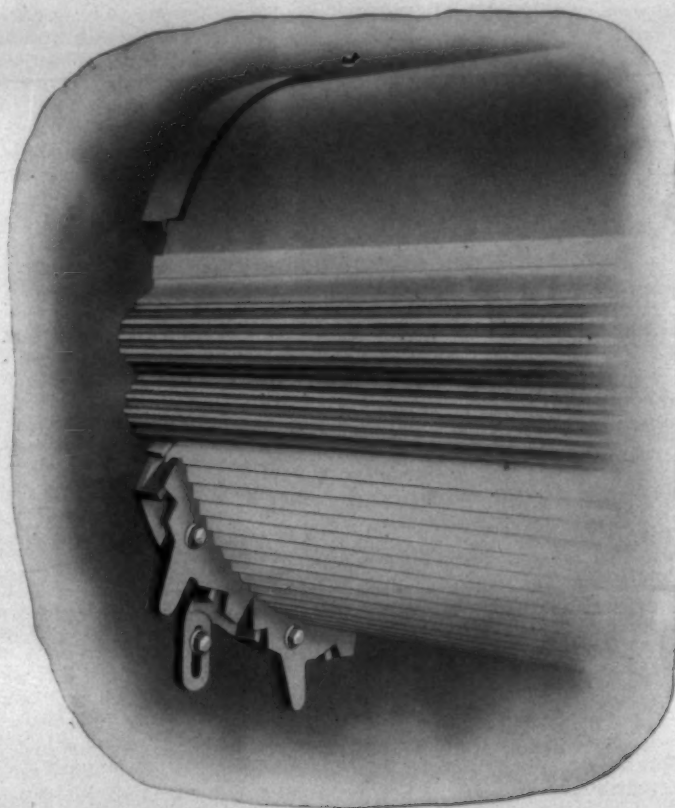
Fall River's mills have been developed, financed and managed by local interests to a much greater extent than other manufacturing centers. With little new blood from the outside, a policy of despotism over a period of years has in numerous cases dulled the initiative of managements. When a change in style from the plainer to the finer

(Continued on Page 38)



# SACO - LOWELL

LARGEST MANUFACTURERS OF TEXTILE MACHINERY IN AMERICA



NEW TYPE ADJUSTABLE GRID BARS  
(Patented)

## FOR A NEGLIGIBLE COST

You can improve the cleaning in all of your pickers. By the use of Saco-Lowell Adjustable Grid Bars you can make settings that will enable you to take out just the amount of waste you desire in accordance with the class of stock you are running through the machines.

No other type of grid can accomplish this. They can be installed in practically all makes of Pickers.

## SACO-LOWELL SHOPS

NEWTON UPPER FALLS, MASSACHUSETTS

SOUTHERN OFFICES

CHARLOTTE, NORTH CAROLINA

GREENVILLE, SOUTH CAROLINA

ATLANTA, GEORGIA

FOREIGN SALES DEPARTMENT, NEWTON UPPER FALLS, MASSACHUSETTS, U. S. A.

# Practical Discussions

By

## Practical Men

### Setting Thread Guides to Order.

Editor:

I have some spinning thread guide wires set for running number 10s yarn, and I am obliged to change to yarns number 30s, what is the rule to go by in order to properly re-set my thread guide wires to fit the new yarn? Technical.

### Bursting Pulleys.

Editor:

As many pulleys burst among our mills, what is the cause and the remedy for this? Anxious.

### What Filling Number to Use.

Editor:

I want to make a fabric which must be woven with 40 picks per inch, 40 inches in the reed and the filling must not exceed 317-10,000 of a pound per yard. What number must the filling be to accomplish this feat? Junior.

### Answer to Second Hand.

Editor:

In answer to Second Hand relative to changing his twist gear, will say that in order for him to get the proper twist gear for his number of yarn it will be necessary for him to square the number of teeth in the cylinder gear that he is now using and this multiplied by the number of yarn being made (actual number) and divided by number of yarn he wants to make and square root of that will be number of teeth in the cylinder gear.

The jack gear will have to be in the cylinder gear is decreased, creased by the number of teeth that Cylinder gear, for example, 30 teeth and jack gear 85 teeth, making 22s years.

$30 \times 30 = 900$  and  $22 \times 900 = 19800$   
 $19800 \div 49 = 404$

Square root of 404 is 20 or number of teeth in new cylinder gear, which is 10 teeth smaller than old gear. By adding 10 teeth to the jack gear, we would have 95 teeth for the new jack gear.

Section Man.

### Answer to Second Hand.

Editor:

In regard to "Second Hand's" inquiry of how to find a new constant, after changing the jack-gear. I will try and explain this to "Second Hand." Now we will take the gearing of an H. & B. spinning frame, the cylinder gear has 21 teeth in it, jack gear has 96 teeth in it, front roll gear has 84 teeth, cylinder, 7 inches in diameter, whorl, three-fourths inches in diameter. Ratio of whorl speed to cylinder speed

8.143. Front roll, 1 inch in diameter.

I will now change the jack gear from 96 teeth to 110 just to show "Second Hand" how it is done.

In the example one (1) I figure the constant for the twist using 96 teeth in the jack gear. In example two (2) I will figure the twist constant, using a jack gear with 110 teeth in it.

### Example One.

$84 \times 96 \times 8.143$   
 $= 995.32$   
 $21 \times 3.1416$  constant

### Example Two.

$84 \times 110 \times 8.143$   
 $= 1140.46$   
 $21 \times 3.1416$  constant

Now "Second Hand" get your catalogue and get your gearing and the other necessary data, and use yours where I used mine.

G. W. H.

### Answer to Second Hand.

Editor:

In answer to "Second Hand" in regard to changing jack gears on spinning frame, will say, if Second Hand will add together the teeth in jack gear and cylinder gear for his range of teeth he can easily change his twist constant by putting in a jack gear and cylinder gear with different numbers of teeth in them.

Example: If your jack gear has 80 teeth and your cylinder gear has 30 teeth you have a range of 110 teeth. Therefore, you can change your jack gear to an 86 tooth gear and your cylinder gear to a 24 tooth gear thus keeping the same range of 110 teeth—or take out as many teeth in the cylinder gear as you add to the jack gear and you will be able to put in more twist in your spinning.

F. W. W.

### Answer to Selvedage.

Editor:

Replying to Selvedage regarding figuring cloth width, etc., you have as stated by your, 2,000 ends plus 80 ends twisted into 2-ply and which are placed 4 2-ply ends in a dent. Now, as you place 2 ends in a dent in the body of the warp

$2,000 \div 2 = 1,000$  dents.

This is one-half of your ends equals the dents you will employ. But of your 80 ends as you place 4 2-ply ends in one dent this will equal 8 single ends in a dent. Now  $80 \div 8$  will equal only 10 dents that you will use for the two selvedages, viz: 5 dents on each side of the cloth  $1,000 + 10 = 1,010$  dents you will require. Now if you will divide your number 25 dent reed into this number thus:  $1010 \div 25 = 40.40$  your reed space occupied will be 40 40-100 inches. Ordinarily on this construction

(Continued on Page 32)

## Causes of Bad Spinning

A series of articles contributed to a Prize Contest on this Subject

### Number Eighty

The question of good running spinning is a broad subject. It should be given much thought as it means good quality, large production, contented help and little waste.

We will take for granted that we are getting good roving from the card room. The first thing to be considered is the atmospheric conditions. Different localities call for different temperatures and is up to the judgment of the spinner. Find the temperature that suits your room, watch it and keep it as near to it as possible and good spinning will result.

We will not go into the details of overhauling frames, but will take it for granted that the frames are set and ready for spinning.

Travelers are very important in spinning. In taking charge of a room just left by some other spinner, I think it poor policy to change to some other make of traveler, as each make makes a groove on the rings. Get a large lot of samples. Your traveler maker has what you want. By using the same make of traveler you will find that you will have a smooth set of rings that are not full of waves, as the latter condition causes more ends to come down than anything I know of.

The next most important factor in good spinning is the roving traverse. Have it set as close the end of each roll as possible without running off at the ends. A grooved roll will not draw properly and the result is bad running work. Have each boss as near the same size as possible. We will not go into roll setting, as this depends on the stock and weight you use.

The roving creel should be watched closely, all skewers kept in good condition. Roving hauler should report any sagging creels, as skewers will extend through top and come in contact with roving on top. This causes friction and results in bad spinning and will work a spinner hard.

Roving trumpets should be watched closely. When used too long, they become sharp. The spinners will twist them sideways, which strains the roving and causes weak yarn. The trumpets become hollowed out which lets the roving run out at end of rolls and it will extend to the whole room if you are not careful.

Gears with thick and thin teeth should not be run as they will not mesh properly. The result is bad work. All back lash in steel rolls should be eliminated. Ends will come down when starting and stopping if there is any back lash.

It is very important to oil the top rolls properly. Too much oil is worse than too little oil as it accumulates lint and gums the rolls. If the cap bars are properly adjusted there is no friction at the end of the roll and just enough oil on the ends of rolls to keep away rust is sufficient. Too much oil here gathers lint, causes friction, binds the rolls, wears out cap bars, runs up roll bill and keeps the work running bad.

The guide wires play an important part in good spinning. They are easily nicked in doffing and millions of rolls have been wasted because burrs on guide wires kept cutting the ends down. The spinners flag them and section men put in new rolls.

Top clearers should be kept in good shape. When the napped flannel wears slick and greasy, put in a new piece, as it will not hold lint and it goes through and tears down the ends. Spinners will continue to put them up or else take out the roving which is sent back to the card room, although it is perfectly good roving.

See that saddles and stirrups are properly adjusted. Stirrups should not rest against steel rolls, as this keeps top roll vibrating and you cannot expect ends to stay up. Besides it is another way of ruining rolls.

The levers should be kept in line, and properly weighted. A lever that rests practically on the creel board releases the weight and causes ends to run bad. If levers are too high, they will bind the rolls and cause rolls to flute.

Scavenger rolls should be kept so they will run freely at all times and properly covered. If these rolls are crooked or have battered spikes in the ends, it reduces speed and will not take care of the sliver from an end that is down. This will tear down the rest of the ends on that stand. If any of the covering is frayed on the ends, ends will continue to be torn down. Paper covered scavenger rolls is the best way I have seen to relieve this trouble.

Spindles should be properly oiled. Never allow the base to overflow. As stated above oil draws lint and the centrifugal force of the spindle draws fine dust up under the whorl and if there is an overflow of oil, this dust descends with the oil. The results are gummed spindles, irregular spindle speed, slack twist and bad work. It is true that you can oil spindles with a mixture of kerosene and overcome part of this trouble, but for safety first in good running spinning, do not flood the spindle base.

If you have charge of an old mill, watch the spindle whorls as they become worn and should be replaced with new ones. Otherwise you have irregular spindle speed, excessive twist and bad running work.

I notice of late that machine builders, in equipping a new mill, send out top rolls flush on ends and not bored ends. These are harder to keep clean and the old style roll with countersunk ends will keep all the lint twisted and gouts or lumps accumulate, whereas the flat ended roll will pack the end in the corners of the cap bar and create friction.

The cams and pitman rolls should be watched and cams kept with



points and pitman rolls replaced with new ones when worn. A dwelling and jumping traverse tears down ends.

It is important to properly adjust thread boards to top of bobbins. I will not give any fixed distance as this depends on condition of bobbins and quills, diameter of rings and barrels of bobbins. Set them far enough away so that the ballooning of the ends will be sufficient to prevent thread coming in contact with tip of quills or bobbins, as this will tear down ends.

Doffing is very important. When starting to fill up the bobbins, do not allow anyone to place choked or stringy bobbins on the spindles. Stringy bobbins tear down ends. If they are loosely stopped up, the centrifugal force of the spindle speed will throw same out at tip and tear ends down. High bobbins put friction between top of bobbin and guide wires, making weak yarn and causing ends to run bad. Bobbins that are too low on spindles haven't enough tension, making slack yarn and the ends run bad.

We all know that cleanliness is very important in any work, especially in good spinning. I will not give fixed rules for this, as it can be carried to the extreme and the best help run away. Rollers should be cleaned, top clearers picked, front guides and rest of the frame kept in a clean condition, so the help will not lose confidence in themselves.

The biggest factor in good running spinning is to practice what you preach. Determine the requirements of your particular room and insist on having them.

P. T. S.

### Number Eighty-one

The following causes for bad running spinning have been gleaned from twenty-seven years' experience as a practical spinner. I shall give the causes, not so much in the order of their importance, but rather grouped under different headings in the order of from spindles to top clearers, and, lastly, under the heading "General."

#### Spindle, Bases, and Bolsters:

Spindles out of plumb; crooked spindles; spindle points broken or worn. Spindles and bolsters worn and dry; dirty bases and bolsters; frames out of line and level.

#### Rings, Rails, and Lifting Rods:

Rings worn, rusty, broken, dirty, or too large in diameter for the yarn numbers being spun. Ring rails not level, either lengthwise or crosswise; warped and vibrating. Worn lifting rods or bushings; holes in rail too large for lifting rods, causing vibration of the rail.

#### Travelers:

Travelers worn and rusty; too light or too heavy for the number being spun; travelers mixed, where spinners are running more than one number

of yarn; number 1 flange travelers being used on number 2 flange ring; lint accumulated in traverse.

#### Separators:

Separators improperly set between the spindles; too much weight on the back of separators, preventing them from going down with the rail; set too near to the front or too near to the back; bent out of proper shape; blades broken off.

#### Bands:

Slack bands; variation in size of bands; lint accumulated on bands increasing working diameter; uneven tension on bands.

#### Thread Boards and Guide Wires:

Thread boards too low or too high; guide wires too near or too far from top of bobbins; worn, rough, grooved, or loose in thread board blocks.

#### Steel Rollers and Top Rollers:

Crooked steel rollers; loose joints; worn bearings; grooved around rollers; rough places; high flutes; sharp flutes; dirty steel rolls; top rollers dry, worn, and choked with waste; grooved and uneven; different thickness of cots; rollers being larger at one end than at the other; where shell rollers are used one shell being larger than the other, the larger roller absorbing the more weight causing the end under the small roller to run badly; not enough weight on the top rollers; weight levers on the back boards; oil on surface of top and bottom rollers.

#### Top Clearers and Under Clearers:

Top clearers not being kept clean allowing the waste to drop between the rolls; lint accumulated on the front of the top clearers where new rollers have been put in; top clearer cot off or worn slick. Under clearers crooked, worn and ragged; waste accumulated on pins preventing them from revolving freely.

#### Bobbins and Skewers:

Bad bobbins that do not fit the spindle properly; broken, rough, and battered on the tops; choked with waste; swollen inside at the butt, preventing them from fitting down on the spindle properly. Dull points on roving skewers; waste accumulated on the points, the shoulder, where the bobbin rest on, broken off, causing the bobbin to rub the creel board as the roving is unwound from the bobbin.

#### Draft Gears, etc.:

Improper setting of draft gears; teeth broken out; worn or choked with waste; dry gear studs. Improper setting of the twist gear; the stud pin of key being broken, causing the gear to skip occasionally.

#### Draft and Twist:

Too much stress cannot be laid on "draft." Many mills sacrifice good

(Continued on Page 24)

# RAYON REEDS

On account of the ever-increasing use of Rayon (artificial silk) by Southern cotton mills, we are making a reed particularly adapted to the Rayon yarns.

Special attention is necessary to the finish on the wire used in these reeds, which finish requires approximately three times the length of time usually given to regular reed wire.

There is, however, absolutely no extra charge for this special finish as we invoice Rayon reeds at our regular standard prices.

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—Leno Doups—Jacquard Heddles—Lingoes—  
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Reeds—Beamer Hecks—Combs.



### Assign Tests to Arkwrights

The Southern Textile Association and The Arkwrights, Incorporated, have opened up headquarters in Charlotte, N. C., with J. M. Gregg in charge as secretary and treasurer.

At a meeting of the research committee of The Arkwrights held on August 16th, at Charlotte, N. C., a number of applications were considered and the following tests were assigned:

L. L. Brown, general superintendent, Clifton Manufacturing Company, Clifton, S. C. Test: The comparative breaking strength of 30's warp yarn using two processes and three processes of picking.

David Clark, editor, Southern Textile Bulletin, Charlotte, N. C. Test: Variation of counts on one side of a spinning frame on 30's warp.

F. Gordon Cobb, vice-president and general manager, The Lancaster Cotton Mills, Lancaster, S. C. Tests: Difference in breaking strength with warp or combination wind on 30's warp using one inch American cotton.

Carl R. Harris, assistant superintendent, Inman Mills, Inman, S. C. Test: End breakage and breaking strength in spinning by setting slubber, intermediate, and speeder rolls as follows: Staple of cotton plus 1-32, 1-16, 3-32, 1-8, 3-16 inches on 30's warp yarn.

J. F. Sentell, Victory Manufacturing Company, Fayetteville, N. C. Test: The comparative breaking

strength of 30's warp yarn using two processes and three processes of picking.

J. M. Gregg, secretary and treasurer, Southern Textile Association and The Arkwrights, Inc., Charlotte, N. C. Tests: Variation of counts on one side of a spinning frame on 40's warp yarn.

James A. Greer, Southern manager, American Wool & Cotton Reporter, Greenville, S. C. Test: Variation in the counts of warp yarn from one side of a spinning frame on 40's filling.

James A. Chapman, vice-president and superintendent, Inman Mills, Inman, S. C. Test: Comparison of results of warp, filling and combination builds on spinning.

Marshall Dilling, superintendent, A. M. Smyre Manufacturing Company, Gastonia, N. C. Test: Results obtained from three and four processes of roving on combed 60's using 1 1/4-inch cotton.

H. L. Dalton, rayon representative, Charlotte, N. C. Test: The eliminating of shiners in weaving rayon.

Other applications were held for further consideration and will be assigned at the next meeting of the research committee.

Membership in The Arkwrights, Inc., depends upon the completion of a test which will be satisfactory to the research committee.

The tests which have been and will be assigned as the basis for securing membership in The Arkwright, Inc., are intended to secure for the textile industry accurate and

definite information on textile problems.

As the research committee will most likely be fully occupied with a great number of tests, mill men who wish to make application for membership should do so at once as all applications will be considered in the order in which received.

The address of the secretary is Box 697, Charlotte, N. C.

### Mayflower Mills Open Retail Department

The Mayflower plant of the Cramerton Mills, Cramerton, N. C., has opened a salesroom at the mill where they will offer to the retail trade the attractive line of goods made and finished at this mill. The salesroom will be open Tuesday and Thursday of each week.

Among the goods offered will be dress goods in voiles, lawns, tafetas, rayon of various descriptions and gingham; draperies in many new and attractive rayon designs; marquisette curtain goods; shirtings and shirts, the shirts being made out of cloth manufactured and finished in the Mayflower.

All of these goods will be sold at practically cost which means a great to the retail purchaser.

Recently the Mayflower put into operation its own finishing plant and as a result it now turns out the finished product from the raw cotton to the sheer fancy dress pattern, the beautiful drapery or any one of a dozen other kinds of cloth.

The rayon products of this mill are very much in demand.

This is the second mill in Gaston county to adopt the retail sales day policy, the Artcloth Mills, at Lowell having put this idea in operation some time ago.

### Georgia Curtailment is Now Less Drastic

Atlanta, Ga.—Although local cotton mills are operating approximately full time, the mill situation in Georgia still is spotted, with business continuing on a hand-to-mouth basis, according to mill officials.

Curtailment continue in many regions, but curtailment is not as drastic as earlier in the year, when the average amounted to 25 to 35 per cent, reaching 50 per cent in some mills for a brief time.

The uncertainty of the cotton market is said to be keeping the trade guessing, and many are inclined to await a more definite idea as to the size of the crop before placing orders, except on the closest hand-to-mouth basis, it is said.

Mills have no surplus stocks on hand, it is said. Some orders, it is pointed out, have to wait until mills can make the stocks to fill them. One buyer found that he would have to wait until September 1 or 15 before he could have his order filled and another buyer at another mill was told he would have to wait four weeks.

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Thus garments made of Celanese brand yarn are **always** cool and comfortable, even in a warm, clammy atmosphere, and safeguard against those dangerous colds which perspiration-soaked undergarments induce.

Celanese brand yarn is the only fiber that lets through to the skin the sun's health-giving ultra-violet rays. Being a non-conductor of electricity, it keeps the body in a constant bath of the electricity generated in the skin. It has unique insulating qualities, keeping the wearer warm in winter, cool in summer.

Celanese brand yarn is neither silk nor rayon. It has distinctly different properties from rayon. ¶ It is highly elastic and remarkably durable; and it has unique hygienic qualities. ¶ Dyed with its special SRA dyes, it is fast to sun, suds, salt-water and perspiration.

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## CAUSES OF BAD SPINNING

(Continued from Page 21)

running spinning because of a poor draft organization, which may be caused by the card room not being able to keep up with the spinning room, making finer yarns than the mill is equipped to make, and lack of knowledge of draft. Hand in hand excessive draft is insufficient twist, and, sometimes, excessive twist.

### Humidity and Static:

Dry, cold air; lack of humidity and excessive humidity; opening windows in windy weather, after having been closed for several days

### Cleaning, etc.:

Dirty frames in general; brushing down overhead while running; blowing or fanning off when frames are in operation; dirty creel boards.

### Miscellaneous and General:

Bad running spinning is often caused by running short cotton, single creel roving, and spinning finer yarns than is desirable; not enough twist in roving; uneven mixing of reworked waste and too much of it; lumps, bunches, and hard ends in roving; ill-shaped bobbins, run over at end; thick and thin places, single and double roving; cut and stretched roving; old roving packed away and dried out or on top of frame and dirty; improper setting of rolls for stock used; and waste accumulated in roving trumpets. Stroke on roving traverse too short or not working properly; excessive speeds.

H. C.

## Number Eighty-two

In entering the contest on bad spinning, we will suppose that the roving is very good. There are hundreds of things, some of them apparently being small and insignificant to the man of little experience, but if they are not settings of rolls for stock used; and waste accumulated in roving trumpets: corrected that may prove to be bigger than expected. Space being limited, I cannot mention all of these things.

First of all, let's look after the humidity. The climate and location of the plant have much to do with varying conditions. Some places require more humidity, some less. After the humidity is regulated so that it is suitable for the work, look after the speeds. Do not get operating speed too high. Under ordinary conditions, I can usually maintain standard speed.

Be sure to have proper circle and shaped travelers best suited to your rings. I find the square point traveler best suited for high speed. See that the steel rolls are properly set, also the leather top rolls, all rolls to be set according to the staple of cotton being run. Have steel rolls picked often enough to prevent laps or waste from accumulating on them. Leather or top rolls should be picked once a day. See that section men put in all top rolls so that they do not run against the lap. If rolls are put in wrong, the point of the leather soon burrs up, making yarn of poor appearance and ends that come down often if they stay up at all.

Set the roving traverse to run as near the edge of rolls as possible not to run off the end of the roll. If it traverses only a short distance on this leather it will within a few days crease the leather in the center of the rolls. This not only damages the leather, but causes the ends to run very badly.

Roving trumpets very often get partly choked up with little lumps of cotton. This may not break roving back, but stretches the roving so that the yarn becomes weak and uneven, and full of thick and thin places.

Discard all roving skewers after they become battered at bottom, as they become hard to turn and stretch the roving. Sometimes the roving may not have enough twist, again it has too much twist. Wipe the roving boards as often as is necessary to keep lumps from gathering at the bottom of the skewer, otherwise you will have uneven yarn that runs badly.

On hand driven spinning, there is very often a variation in the diameter of the bands, or the whorl on spindle may be worn down, thereby putting uneven twist in the yarn. Sometimes the spindles become gummed because they are not properly oiled, or the oil is of inferior quality. This will cause spindles to act "lazy" and prevent the yarn from running well. Sometimes I find it necessary to mix a little coal oil with spindle oil in order to clear the spindle base of any foreign matter which has accumulated therein, so that the spindles will turn free and easy.

On tape driven spinning, the idler sometimes becomes gummed and it is necessary to remove it and clean, oil and replace it. This gives spindles free action, besides saving a great deal of tape. Spindles should be plumbed to center of ring, top and bottom. Have ring rails perfectly level, cross-wise and lengthwise. If ring rails are not level, they cause travelers to pull hard and stretch the yarn. Travelers that are left on the rings too long become sharp and chafe the yarn, making bad running and weak spinning. Guide wires should be set over center of spindles. They sometimes become worn with a thread groove, causing ends to break back often and run badly.

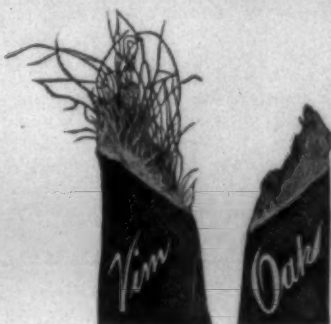
Guide boards should be very carefully set the proper distance from the top of the spindles. The use of a knife on any bobbin or quill should not be allowed, as it means a quill or bobbin with a rough top which constantly breaks the ends, besides making weak yarn.

Have all top clearer boards covered with flannel and scavenger rolls well covered. The guide boards and back boards become dirty if not cleaned often enough. This will cause lumps of lint to catch on the yarn and often breaks as it hits the traveler.

(Continued on Page 32)



# HOUGHTON



## FIBER LENGTH MEANS LEATHER STRENGTH

by Chas. E. Carpenter,  
Alias "Carps"  
Alias "The Old Man."

**I**T is hardly necessary for me to spend the Company's good money to inform mill men that the strength and durability of a piece of cloth are in proportion to the length, strength and closeness of contact of its fibers. As these qualifications, it might also be stated that the strength and durability are also in direct proportion to the softening, or lubrication, of these fibers.

But I am not a mill man and, therefore, I cannot view things from a mill man's point of view. But I am a leather manufacturer and I do see things from a leather manufacturer's point of view. And as a leather manufacturer, I am surprised that so few mill men realize that the strength and durability of leather are dependent upon the same properties as are the textile fabrics.

Leather is a fibrous product, the fibers being supplied directly to the hide by Nature and instead of being woven, or spun, in two directions, as with fabricated cloths, the fibers of leather are a dense

plexus, knit and interwoven in all directions. In fact, they are annexed to one another in Nature's process of spinning the fibers. They intermingle, do leather fibers, as the hide is spun.

In spite of the assertions of literature (supposedly from eminent authorities) to the contrary the process of tanning does not produce leather fiber. Nature and Nature alone produces the fiber in the hide and if the fiber is not put in the hide by Nature, no process of tanning, or other manipulation, can put it there. As a matter of fact, the vegetable process of tanning destroys much of the fiber. The greatest advantage of the VIM process of tanning is in the fact that it preserves 100% of the fibers of the original hide.

The illustration is a photographic reproduction of VIM and the best quality of oak belting leather, torn under the same conditions. The comparative length of fibers ought to convince any intelligent mill man of the comparative strength and durability of VIM and oak leather belting.

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Member of Audit Bureau of Circulations  
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DAVID CLARK  
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Managing Editor  
Associate Editor  
Business Manager

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## The Textile Institute

WE have no apology to make for criticism of the manner in which the preliminary organization of the Cotton-Textile Institute was formed.

It is almost inconceivable that there was not, at least, one among those, from the South, in attendance at the New York meeting who did enough thinking to realize and suggest the impropriety of electing four of the five temporary officers from New England and of placing at the head a man so unfriendly to the South as ex-senator Lippitt.

It seems inconceivable that there was not one man present who gave enough thought to the serious problem of getting approximately eight hundred Southern mills to join the Textile Institute, to realize that such a task would require more than ordinary tact and yet tact was absolutely missing and no effort whatever was made to ascertain the sentiments of the men throughout the industry.

One branch of the industry that asked to be allowed to have representatives on the committee forming the organization were turned down cold and other branches were left without representation except such as was voluntarily assumed for them by men who had been selected as the representative of other branches.

The textile industry of the South expected and had a right to expect, more care and thought on the part of the men who represented them at the preliminary meetings of the Cotton-Textile Institute.

In spite of this situation we are faced with the fact that a Cotton Textile Institute is absolutely necessary to the stabilization of the textile industry of the South and that

permanent prosperity is doubtful unless some organization of that kind is formed.

Those who attended the New York meeting, in spite of their mistakes, earnestly and sincerely wished to do something for the industry and we have the assurance that the man who will head the Cotton-Textile Institute will be a strong, outstanding man who is not connected with the textile industry either North or South.

It is an open secret that an unsuccessful effort was made to secure Herbert Hoover and we know that at least two men of his type both of whom would be very acceptable to Southern mills are now under consideration.

Although the mills in the United States converted 6,400,000 bales of cotton into cotton goods between August 1st, 1925 and August 1st, 1926, they had far less goods on hand at the end of that period than at the beginning.

The consumption of cotton goods in the United States during the past year was therefore far in excess of production and was undoubtedly the equivalent of 7,000,000 bales of cotton.

In spite of the fact that the buying of cotton goods greatly exceeded production and undoubtedly broke all previous records both from the standpoint of volume and per capita consumption, the cotton mills of the South have made no profit and those of New England have suffered heavy losses.

In the face of such a situation it requires no great amount of intelligence to realize the absolute necessity of some such organization as the Cotton-Textile Institute and based upon the assurances that have been given us relative to the type of man who will be chosen as president, at the October meeting, we advise the cotton mills of the

South to forward their applications for membership in the Cotton-Textile Institute.

In every industry and in almost every organization there are men who form dislikes for other members, but in this effort to put the cotton manufacturing industry back upon a prosperous basis, the prospects for profits and dividends should far outweigh prejudices and dislikes.

The industry can not go on making small profits for a few months and then losing money for the remainder of the year. The mill that has sold print cloths at 39 cents per pound or 20/2 yarns at 30 cents within the past three months should not hesitate about aiding in the formation of the Cotton-Textile Institute.

At the worst, we do not see that any great harm can come through membership in the Institute. It is certainly better to sign an application for membership in the Institute than to sign one for a receiver and yet if conditions continue for another year as they have for the past three, the latter application will be signed by many.

The South does not seek any undue advantage through the Cotton-Textile Institute, but does expect to receive a square deal and we have assurances that such will be given.

When the Institute functions so that New England mills can break even, the mills of the South will make a profit. When it functions so that New England mills are making reasonable profits the Southern mills will get rich.

The South has certain economic advantages that can not be overcome and the plan of organization of the Institute specifically provides that legislative and political questions shall be excluded.

Many of the mills dislike the manner in which the formation meetings of the Institute have been conducted and we are in accord with them, but lean years in the face of record buying of cotton goods, shows us the necessity for some stabilizing organization and we advise laying aside prejudices, resentments and dislikes and joining the Cotton-Textile Institute under such assurances as have been given.

## Spinners Must Change Methods

IN a letter to David Clark, editor of the Southern Textile Bulletin, M. W. Darby, treasurer of the Cherry Mills, Florence, Ala., discusses the practice of spinners selling their output at below cost and predicts dire consequences for the industry unless mills will fix a profitable price on their yarns and refuse to sell them for less. Mr. Darby writes:

I think time in the very near future will prove that you are really a good prophet, for your predictions in your editorial "Yarn Mills Installing Looms" in your issue of the 5th is just as true as night follows the day.

There is no future for the average coarse carded yarn mill for many reasons, most of which you have mentioned. There have been very few, if any yarn mills that have

made any money in the last three years and yet it seems the majority are still running night and day and selling their yarns at several cents a pound below cost.

Our mill is refusing orders practically every day because the offers are running sometimes as much as 5 cents per pound less than cost for the average yarn, up to twenties, which is as fine as we make. In fact the general price of yarns today is based on cotton at around 13 cents per pound for the mill to come out even much less make any profit. The writer has not heard of and knows of no white cotton that can be bought today or in the last few months for less than 17 to 18 cents, and why they sell their yarns at such losses is beyond comprehension and at the same time, run the mills full time and in many cases double time, by running night and day, and this policy if continued much longer, certainly means bankruptcy for most of us, who are trying to run spinning mills.

Just as long as we sell our yarns to the yarn consumers at less than it costs us to make them, just so long will we continue the period of no profits, but just as soon as we put a profit on them and hold them for this price and regulate our production to the demand, then will begin a period of prosperity, and I believe such a condition can be brought about in 30 days, but to do so, all night work will have to stop and day production held in accordance with the demand, in no other way can we hope to save ourselves. Thanking you for timely utterances, I am

Yours very truly,

M. W. DARBY

Treas. Cherry Cotton Mills.

## Survey of Yarn Mills

WE now have in course of preparation and hope to be able to publish next week a comparison of Southern yarn mills on July 1st, 1926, with those of July 1st, 1916.

We are compiling a list of the mills under specialty yarns, rope and twines, carded weaving yarns, carded knitting yarns and combed yarns.

The yarn industry of the South has been in such a deplorable condition due apparently to a surplus of production that we thought it worth while to make this survey.

## A Bankers Viewpoint

O. H. Cheney, active vice-president of the American Exchange Pacific National Bank of New York, said in a recent address:

The time is not far distant when a business man's membership in trade associations will be an important factor in his banker's judgment of his credit rating. It will be that for three reasons:

Trade association membership is a measure of character, because it shows the member's ability to get along with others. It is a measure of intelligence of the member's business methods, because he is trying to use co-operation as an economical promotion weapon. Trade association membership is a measure of the soundness of the industry, because it is doing something for the stability, efficiency and economy of production and distribution.

That is why as a banker I believe that the need of the nation is better, stronger, more active, more intelligent, more public-spirited trade associations. Only thru them can there be better business men and better business.



## Personal News

Maurice Harcourt has resigned as overseer of spinning at the Imperial Mills, Eatonton, Ga.

J. J. Key has resigned his position with the Lydia Mills, Clinton, S. C., and is now with the Eureka Mills, Chester, S. C.

I. B. Covington, superintendent of the Wade Manufacturing Company, Wadesboro, N. C., spent the last week-end at Blowing Rock, N. C.

Ralph Edwards, overseer of carding at the Imperial Mills, Eatonton, Ga., will hereafter have charge of the spinning also.

A. W. Robinson has been promoted to night overseer of carding and spinning at the Belmont Fabric Company, Belmont, N. C.

J. D. Watkins has resigned his position with the Piedmont Mills, Egan, Ga., and is now located in Atlanta.

T. R. Morton, from Mexia, Texas, has accepted the position of general overseer of twisting, warping and spooling with the Goodyear Clearwater Mills, Cedartown, Ga.

A. J. Kelley has resigned as overseer of carding at the Eastern Manufacturing Company, Selma, N. C., and accepted a position with the new Roseboro Mills, Roseboro, N. C.

A. B. Peterson, overseer of carding at Gainesville, Ga., paid us a visit last Saturday, while on a visit to his old home and relatives at Mount Holly, N. C.

Noah Baker has been transferred from overseer of carding at the Hart Mills, Tarboro, N. C., to a similar position at the Fountain Mills, of the same place.

R. F. Lippard has resigned his position with the Southern Manufacturing Company, Granite Falls, N. C., to become overseer of carding and spinning at the Belmont Fabric Mills, Belmont, N. C.

J. L. Brannon, who has had charge of the erecting force and overhaulers at the Martel Mills and Beaver Mills, has resigned to become overseer of carding at the Chadwick-Hoskins Mill No. 3, Charlotte.

Brown Mahon, vice-president of the Judson Mills, Greenville, S. C., will in the future divide his time between the mill and the New York office, devoting his time in New York to the work of the sales department.

George W. Pritchett, Southern representative of the Morse Chain Co., has been in ill health for the past several weeks and is confined to his home in Charlotte. Mr. Pritchett is one of the best known and most popular men in the Southern textile field and his friends hope that he will soon be in his usual good health.

Alex Roberts has resigned as superintendent of the L. Banks Holt Manufacturing Company, Graham, N. C., and moved to Winston-Salem, N. C.

F. C. Wood who has been with the Wymojo Mills, Rock Hill, S. C., for several months, has accepted a position as overseer of spinning at night at the Arcade Mill, Rock Hill, S. C.

William Miller has resigned as overseer of carding and spinning at the Fountain Cotton Mills, Tarboro, N. C., and accepted a similar position at the Mansfield Mills, Lumberton, N. C.

H. D. Jordan, who for several years was overseer of the roller shop for the Republic Cotton Mills, Great Falls, S. C., and who has been running a shop in Chester for the past year, has moved to Rock Hill, S. C., and has started a shop under the name of the Jordan Roller Shop, on Hagin street.

### Staples Losing Out in Textile Plants

Greensboro, N. C.—A trend away from some of the staples in textile output is discernible here, the Proximity Manufacturing Company going in for production of khaki cloth on a large scale. The management of the plant said that the cloth is bought in large quantities from the big mills in South Carolina that turn out what is known as "gray goods," the simplest of all cotton manufactures, and then is finished and dyed here and made in khaki.

The Proximity plant itself does not have any of its looms on the material, but finishes the goods after buying the cloth from other mills. Denim is still the biggest line manufactured by the White Oak and Proximity mills.

Khaki production is said to have been a big aid in sustaining the goods market. As women and others have turned from cotton to silk and to rayon and rayon mixtures, the staples have had harder sledding and the production of khaki has furnished a market for gray goods that, added to the other calls for cotton cloth, has had a good effect upon the market.

It was once thought that rayon mixtures would prove the salvation of the textile business, but the Elmira Cotton Mills, in Alamance county, went broke recently, and it had been on rayon and rayon mixtures exclusively. It appears that no longer will mills look to rayon for financial security, but that the staples are the backbone, after all.

In support of this, there is the statement that the cloth mills are not having as hard sledding as the yarn plants, the latter product lending itself more to novelties of bales of cotton cloth turned out by the great textile plants.

## AMALIE PRODUCTS

### Power of Penetration

**The Facts about Amalie Sonolene are well worth Knowing!**

What are you looking for in the bleaching and dyeing of cotton yarns and piece goods? Speed? Economy? Quality? All these you get in Amalie Sonolene—a most powerful detergent.

For Amalie Sonolene is a *forceful penetrant* which

—increases the effectiveness of penetration by the alkali, and counteracts its harsh action;

—causes maximum thoroughness and completeness of the Kier boiling;

—readily dissolves and removes the natural fatty and waxy impurities in the cotton, attaining perfect white in bleaching;

—requires only one boil where two were needed;

—in open and closed dyeing machines, eliminates the usual difficulties of ordinary turkey red oils through foaming, being recommended especially for Franklin Dyeing Machines;

—in raw stock dyeing, eliminates static by the addition of from 1½% to 2%.

And all these advantages come back to its essential property—its *power of penetration*. Try out Amalie Sonolene and be convinced!

*Leaflet completely describing the properties, function and uses of Amalie Sonolene sent anywhere free upon request.*

**L. SONNEBORN SONS, Inc.**

*Manufacturing Chemists for the Textile Industry*

114 Fifth Avenue

New York

Sales Offices and Warehouses in all Principal Textile Centers

# Amalie SONOLENE

**L. SONNEBORN SONS, INC., NEW YORK, N.Y.**



# MILL NEWS ITEMS OF INTEREST

**Houston, Tex.**—The Houston Cotton and Twine Mills will increase their capital stock from \$150,000 to \$225,000.

**Albemarle, N. C.**—The several mills here which have been closed down for their annual vacations, have resumed operation.

**Newberry, S. C.**—The Newberry and Molloy Cotton Mills shut down for a two weeks' vacation, August 7.

**Kinston, N. C.**—The new equipment to be added to the Kinston Knitting Company, will consist of 10 knitting machines for making pure silk hosiery.

**Ranlo, N. C.**—The Ranlo Manufacturing Company, recently purchased four 40-horsepower Fairbanks-Morse ball bearing motors for driving heavy twister frames.

**Waxhaw, N. C.**—The Rodman-Heath Cotton Mills have resumed operations after having been closed for five weeks. During this period the mill has been thoroughly overhauled and a number of improvements made.

**Charlotte, N. C.**—The Mercury Mills, which has taken over the Mecklenburg Mills, expects to have the plant in operation in about 30 days.

This announcement was made by the Martel Mills, Worth St., New York.

**Winston-Salem, N. C.**—The Hanes Hosiery Mill is now moving its equipment to the new building completed some time ago, and will soon be operating all of their equipment in the new location. The new building is 3 stories high, 500x126 feet, with a dyehouse 2 stories high.

**Athens, Ala.**—The Wellman Cotton Mills Company resumed its night shift last week. The night shift was discontinued about two months ago when the decreasing demand for cotton yarns made such a step appear advisable. Many of the night employees left but quite a number remained and were given part time jobs. The entire production of the mill consists of very high grade cotton yarns.

**Burlington, N. C.**—The May Hosiery Mills, now have their own self-organization to replace Stamper & Kaiser, who formerly represented them and who dissolved August 1. H. M. Kaiser, of the old selling organization, has become vice-president and general manager of the May Hosiery Mills and is in charge of the selling offices, which are located in the site at 93 Worth street.

The May Hosiery Mills manufacture men's and women's hosiery of the popular price grade

**Cureo, Texas.**—The Cuero Cotton Mills Company, has been incorporated here and will erect a plant of 5,000 spindles. P. M. Keller, well known mill man, of Belton, will be manager, as previously reported.

**Fort Mill, S. C.**—The two plants of the Fort Mill Manufacturing Company, are again running on full time after having been on a curtailment schedule for a number of weeks.

**Roseboro, N. C.**—The Roseboro Mills, which have a 5,000 spindle yarn mill under construction here, have placed orders for Fairbanks-Morse ball bearing motors to drive the equipment.

**Charlottesville, Va.**—Monticello Textiles, Inc., recently incorporated here, as noted, has let contract for a mill building and will install equipment for manufacturing knit underwear.

**Greenville, S. C.**—Most of the mills here have resumed work after the regular vacation periods, but a number of them continue to curtail operations on the same basis as during the past two months. The F. W. Poe Manufacturing Company, is curtailing on Friday and Saturdays. Judson, Camperdown and Dunean Mills are running full time.

**Raleigh, N. C.**—The Caraleigh Mills Company, has recently installed some additional opening and preparatory equipment and have made some changes in their weaving equipment. The mill has an elaborate dyeing and finishing equipment for making the many shades which are required for their Blue Wing Zephyrs, and nothing is being left undone to make this line the equal of any on the market. The Farish Company is now the selling agents for this mill, and reports that much interest is being shown in the line being made by this mill.

**Chattahoochee, Ga.**—The Silver Lake Company, has been incorporated here for the purpose of erecting a large plant for the manufacture of braided cord. The new mill will be located near the Whittier Mills, with which it will be affiliated. The incorporators are Paul F. and Sidney B. Whittier, sons of W. R. Whittier, treasurer of the Whittier Mills and John T. Carroll, also of the Whittier Mills.

It is planned to begin work on the plant at once. The mill building will have a floor space of 65,000 square feet and will be equipped with the latest type braiding machinery.

For over 12 years the Silver Lake Company, of Newtonville, Mass., and the Whittier Mills, have been under the same management. Spencer Borden, of Fall River, being president of both companies. Yarns for making the Silver Lake cord have been made by the Whittier Mills for many years.

**Greensboro, N. C.**—White Oak Mills, Proximity Mills, Proximity Print Works and Revolution Mills resumed operation this week after a close-down of two weeks in which the employees were free for vacation activities and during which time repair work was done on mills and machinery.

Many of the workers used their vacation time in making trips back to their original homes and visiting relatives and friends elsewhere.

Construction activities started by the Proximity Manufacturing Company included several projects, among them a \$25,000 investment for general repair work, \$8,000 for a one-story brick cloth matching room, \$1,500 each for three frame residences of six rooms each to cost \$1,200 each and to contain four rooms. The total of the permit activities is \$43,500.

## THE FARISH COMPANY

COMMISSION MERCHANTS

100 WORTH STREET

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## LA SOIE DE CHATILLON

Soc. An. Italiana—Capital 200,000,000 Lires—Milan, Italy

RAYON (Viscose)

DAILY OUTPUT 50,000 lbs.

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ARTIFICIAL STRAW

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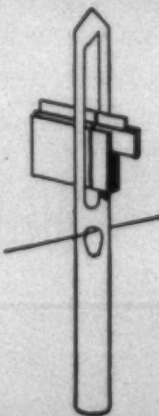
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## THE K-A ELECTRICAL WARP STOP

as described by a superintendent who installed K-A fifteen years ago and, who is now installing automatic looms:

"YOU MADE YOUR MOTION SO WELL THAT I AM ABLE TO TRANSFER THEM FROM MY OLD LOOMS, BUYING ONLY SUCH PARTS AS ARE NEEDED BECAUSE OF DIFFERENT LOOM CONSTRUCTION." There are mills that still use K-A Electrical Motions installed over twenty years ago.

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Complete Topographic Surveys  
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Largest Landscape Organization in the South



## Report 17,000,000 Spindles in Textile Institute

Atlanta, Ga.—Following a meeting of the Southern membership committee of the Cotton-Textile Institute, presided over by W. J. Verreen, chairman, George S. Harris, member of the committee and president of the Cotton Manufacturers' Association of Georgia, announced that mills representing 8,225,000 spindles in the South have signed up as members of the institute.

Mr. Harris announced that more than 17,000,000 spindles already have been signed up in the North and South, and each mail is bringing in new members, and that before the meeting on October 20 in New York to perfect a permanent organization with the election of directors and officers, more than the necessary 18,000,000 spindles will have been signed up.

He said that 60 per cent of the print cloth group in America are members of the institute, this constituting the largest group in the textile industry of the country.

Mr. Harris declared that many mills have held up joining the institute owing to the absence of officers on vacations, and that as rapidly as they return they are sending in their memberships.

He announced that mills representing a total of 1,724,000 spindles in Georgia have signed, with North Carolina mills representing 2,056,000 spindles, South Carolina 3,215,000 spindles and that other States namely Tennessee, Mississippi, Virginia, Louisiana, Texas, Alabama and others represent the remaining 1,229,500 of the total already signed up in the South.

The Northern mills have signed up a representation of 8,690,000 spindles, according to latest figures available.

Stressing the fact that the object of the Institute shall be to promote the progress and development of the cotton industry, Mr. Harris, emphasized that this means from grower to consumer.

"When the Institute begins to function I am confident that it will fulfill its chief aim of stabilizing the cotton industry," he said.

"The cotton goods industry de-

sires the full cooperation of growers, and at all times will stand ready to give him all information obtainable for his benefit, and with the cooperation of the growers, the cotton goods industry will have made a tremendous forward step in bring-

ing stabilization to the entire textile industry.

"There are other cotton institutes in other countries, and previously they have had none to work with in this country, but with cooperation with them, we will have available

statistics of great value that we will have never had before.

"It is the purpose of the Institute to seek the cooperation of all agencies in the cotton producing and manufacturing industry, and with that, stabilization of the industry is inevitable."

## Victor-Monaghan Company Profits

The annual report of the Victor-Monaghan Co., Greenville, S. C., which was made public last Friday, shows profit from operations, for the year end June 30, 1926, were \$437,176.27 which compares with 414,696.68 for the year ended June 30, 1925. Dividends of 7 per cent were paid on the preferred stock and the usual 8 per cent on the common.

One of the important features of the statement just given out by the Victor-Monaghan Co., is the considerable reduction of inventory in yarns and cloths, reflecting the attitude of many of the leading mills of the country that they would have to adopt, to whatever extent they could, the policies of their customers. As long as the buyers refused to carry stocks, many mills have found it to their best advantage to take a lesson from this example.

The following comparison of Victor-Monaghan Co. inventory tells the story:

### Inventory of Cloth and Yarn.

June 30, 1924	\$,731,588.59
June 30, 1925	1,136,428.95
June 30, 1926	694,046.06

Considering the many varieties of styles of goods made by this company, the bulk of whose production is fancies, officials consider the 1926 inventory as remarkably low. It is, of course, necessary to have a certain amount of cloth on hand to balance assortments and styles in accordance with the needs of the trade.

Current liabilities June 30, 1926, were \$565,683.98, being a considerable reduction from June 30, 1925, when they were \$1,001,940.45. The mill is able to benefit through smaller liabilities through such a large inventory reduction as is noted here, it is pointed out.

## DRUIDOAK LOOM LEATHERS

Highest Grade Oak Tanned for Cotton and Duck Looms

### The Druid Oak Belting Co., Inc.

Baltimore, Md.

### Hollingsworth on Wheels For Lickerins

My unsurpassed service in rewinding Lickerins has pleased the largest and most exacting mills. You are due yourself an investigation.

Write for Testimonials  
Box 69, Greenville, S. C.

## THE TRIPOD PAINT COMPANY

—MANUFACTURERS—

### ATLANTA GEORGIA

### MILL WHITES, PAINTS, STAINS, Etc.

Write for Prices and Free Samples

*Keep them on hand*

Make a note of these telephone numbers, and keep them on hand.

For prompt service in case of electrical troubles of any kind, you are sure of quick answer and skilled workmanship, when you call.

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Day Phone Ivy 0100  
Night Phone Ivy 1287

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Day Phone 504  
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## Westinghouse Service

WESTINGHOUSE ELECTRIC & MANUFACTURING CO.

426 Marietta Street  
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210 E. Sixth Street  
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### Position Wanted

Young man 21 years of age desires position as timekeeper in weave room, or general pay roll work. Can furnish best references from present employers. Address C. K. S. care Southern Textile Bulletin.

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400 Rooms      300 Baths



**Herald Square Hotel**  
34th St. NEW YORK  
Just West of Broadway

Rooms with private bath  
\$3 to \$6

One block from Penn. Station

## Reliable Humidifying Devices

Since 1888

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**Knuckle Joint**

60 to 500 Tons Pressure

**Rapid Simple Durable**

Established 1872

Let us tell you more about them.

**Dunning & Boschert Press Co., Inc.**  
367 W. Water St.      SYRACUSE, N. Y.



### Coolidge Makes Study of Cotton Mill Situation

Paul Smith's N. Y.—With a country enjoying in general a widespread prosperity, President Coolidge is working to aid the agricultural and textile manufacturing industries where conditions are not up to the general economic levels.

While details were withheld, it was said after a visit to Secretary Hoover of the Commerce department with Mr. Coolidge, that the government was attempting to improve the farm situation which depended upon a coordinated effort of the agencies that provide agricultural credits to the country.

Such moves as have been made, it was indicated, have been of a tentative character and directed and mortgage loan concerns. through banks, insurance companies. Efforts of the Commerce depart-

ment in the textile industry were said to have been especially centered on the cotton spinning trade. While this, too, was not described in detail, it was said some progress had been made in adjustments in the industry and in a beneficial character and that in the past month or six weeks there has been a distinct improvement.

In general and apart from some lags in agriculture, textiles and bituminous coal, Mr. Hoover, said the country was never in such excellent condition as at present.

Even with agriculture, he added, there has been an improvement in prices of some commodities, while construction is 15 per cent greater in volume than a year ago.

#### Cotton Picking Crisis in Texas.

San Antonio, Texas.—The cotton picking situation in the Rio Grande Valley has reached an acute stage.

The year's crop is the most abundant this section has witnessed in many years. Because of the extremely hot weather cotton opened sooner than had been anticipated. A threatening shortage of cotton pickers has resulted.

Experts state a rain or wind storm at this time would result in millions of dollars loss to the growers.

#### New Play Cotton.

Wellington, Sears & Co., have just brought out a new Eagle & Phenix fabric, which is called E & P Play Cloth, 32 inches wide. As the name suggests, this is a romper cloth. It is shown in a range of checks, stripes, solid colors and piece dyes. This is the first time that the Eagle & Phenix mill has offered checked patterns, and this is made possible through the installation of new equipment. Some of the yarn-dyed

mixed effects give the impression of a whipcord.

Wellington, Sears & Co., report business recently in the Eagle & Phenix department has been better than at any time since they had become selling agents for the mill. Some good flannel business has been included in this.

### The Ribbon Industry

A COMMERCE report from St. Etienne, France, states has 50 large ribbon factories and operates 18,000 looms, part of them hand looms on ribbons.

It also says, that both Switzerland and Germany have ribbon industries with more modern equipment than St. Etienne.

Those who seek new fields in textile manufacturing might look into the volume and character of our ribbon imports.

### MANUFACTURERS OF HIGH GRADE AND TRUE RUNNING BOBBINS

#### ROLLS

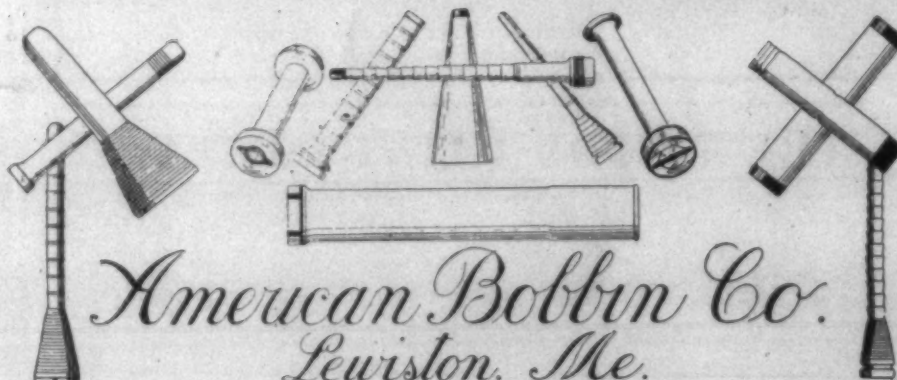
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MULTIPLE HOLE FEELER  
SLUBBERS  
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WARP  
TWISTER  
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FILLING  
FLAX AND JUTE  
METAL PROTECTED  
DUCK FILLING  
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WOOL FILLING  
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WE ARE SPECIALISTS IN MANUFACTURING

AUTOMATIC LOOM AND RAYON BOBBINS OF ALL TYPES

INSPECTING  
SEWING  
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Textile Machinery  
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WORCESTER, MASS.

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DOUBLING  
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The Standard of The World For Tests of Fabrics,  
Yarns, Twines, Etc.

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SPOOLS  
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SKEWERS  
ROLLS, ETC.  
OF EVERY DESCRIPTION

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Our Automatic Shuttles are  
giving Perfect Satisfaction in  
Leading Mills throughout the  
country on all classes of work



## See These Liners—

They are bushings—they keep your Link-Belt Silent Chain Drives working at top efficiency even after long years of service.

Notice how the smooth hardened pin fits in between them?

They take all the joint wear—there can be no elongation of the hole or eye of the link—this construction is truly "different".

There's the secret of durability—and incidentally smooth running, 98.2% sustained efficiency (actual test) in our Silent Chain Drives—it's in the joint construction.

Another reason why Link-Belt Silent Chain Drives, after 5, 10, 15 and even 20 years, are still in service.

Send for a copy of our Textile Book No. 625. Also send for a Silent Chain Data Book No. 125. Drives from ½ to 10 H. P. carried in stock throughout the country.

2724



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		610 Citizens and Southern Bank Bldg.
		504 New Orleans Bank Bldg.

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## Efficient Silent Chain Drives

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# Receivers' Sale

by

## PUBLIC AUCTION

By order of Pierce H. Brereton and Walter D. Wood, Receivers

TUESDAY, AUGUST 24th, 1926

WEDNESDAY, AUGUST 25th, 1926

Beginning at 10 o'clock, A. M., Daylight Saving Time, each day, on the premises.

The Mill Village, Mill Property, and Equipment

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ELIZABETH MILL

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53—PARCELS—53

# REAL ESTATE

(to be sold separately)

Comprising: THREE STORY BRICK MILL, 392x74 ft., with two story addition, 60x84 ft.; one story office; two towers; brick boiler house, 60x42 ft.; two-car brick garage; two frame storehouses; lumber house and scale house; barn; waste house; pump house and sheds. The mill buildings have sprinkler and humidifier system; unusually good plumbing. THE LAND contains about 170 acres. SPUR TRACK, EXCELLENT WATER SUPPLY. Superintendent's house; recreation hall; six one-family cottages; four large tracts of land, available for manufacturing or platting; three house lots; boarding house; thirty-six two-tenement houses (mill village.)

980—LOTS—980

## MACHINERY and EQUIPMENT

THE COMPLETE EQUIPMENT OF A 31,104 SPINDLE YARN MILL, including: 14,282 twister spindles—Fales & Jenks and Whitin; Dobson & Barlow bale opener; 7 Atherton and Dobson & Barlow lappers; 136 Whitin flat cards; 29 Saco-Pettee railway heads; 8 Dobson & Barlow lan machines; 146 deliveries Saco-Pettee and Whitin drawing; 64 Dobson & Barlow combers; 240 slubber spindles—Providence Machine Co. and Whitin; 636 spindles, first intermediates—Providence Machine Co. and Whitin; 1824 spindles second intermediates; 6856 spindles—Providence Machine Co.; jacks; 31,104 spinning spindles—Fales & Jenks and Whitin spinning frames; 1216 spooler spindles—Easton & Burnham and Carpenter; machine shop and office equipment; shafting, pulleys; leather belting; about 1200 box shooks; large quantity of coal and wood, etc.

This is a very unusual offering for manufacturers. In addition to the existing improvements, already complete for a plant of this kind, the combination of a VERY LARGE AREA OF LAND UNHAMPERED BY OTHER DEVELOPMENTS OR RESTRICTIONS, THE AMPLE SUPPLY OF GOOD WATER, THE OPPORTUNITY OF A VERY LARGE INCREASE OF RAILROAD TRackage AT A MINIMUM OF EXPENSE, AND THE LOCATION IN THE IMMEDIATE VICINITY OF A FIRST CLASS HELP CENTER make this property a most desirable site for some very large manufacturing development.

The Elizabeth Mill has been in constant and profitable operation for over fifty years and has a very high reputation for manufacturing high grade yarns. The owners are desirous of retiring from manufacturing and are offering the property divided into lots to suit purchasers.

To be sold separately, in lots to suit purchasers, in the order numbered in catalogue, to the highest bidders without limit or reserve. Send for descriptive catalogue.

## G. L. & H. J. GROSS

Established 1888

Real Estate and Insurance

170 Westminster St.

Providence, Rhode Island

## CAUSES OF BAD SPINNING

(Continued from Page 24)

If draft is too long, it causes weak and thin places in the yarn. Sometimes draft on steel roll gears becomes worn or has a tooth broken out. This may not cause the whole side of the ends to come down, but will keep spinners busy putting up the ends, besides making weak yarn, with thick and thin places in it. As many as ten to fifteen ends that do not run right will keep a six side spinner busy at all times walking the alley trying to keep them up. This is not taking into account the bad work and waste resulting from these ends.

Frames should be lined and leveled as often as necessary in order to keep them level. Spinners should be trained to see that every bobbin or quill is put down tight on the spindles. If not, bobbins make slack yarn which very often gets on the spool and then to the warper where it breaks. Sometimes it goes to the weave room before it breaks. The very smallest things in the spinning room are the largest factors pertaining to good running work. Look for the little things.

Small Object.

## Number Eighty-three

A few of the causes of bad spinning are as follows:

Roving without sufficient twist to keep it from stretching; too long a draft on fly frames; draft gears worn and incorrectly set on fly frames; too long a draft on spinning; insufficient twist; hard ends in roving; singlings and doublings in roving; worn roving skewers; draft gears in poor condition and not set right; worn steel rolls, rolls with loose joints and rolls not set length of cotton; worn cap bars; leather rolls in poor condition; middle and back thread boards set too close or too far from top of spindle; guide wires worn and not set right; worn rings and rings not right size for number of yarn; defective bobbins; roving traverse stroke too long.

Spindles not plumbed top and bottom; frames out of line, ring rails not level; traverse too light or too heavy or of the wrong circle and style; excessive speed of spindle; separators out of line and set to high or too low; leather rolls not oiled often enough or with the right kind of oil; cots off on lap sticks; cloth off on lap stocks; breaking strength not up to standard; too much variation in numbers; roving back guides or front guides, leather rolls, steel roller stands and top slats not cleaned often enough; too much or too little humidity; temperature too high or too low.

Last but, not least, keep your room clean. I sometimes think that even a dirty floor makes the work run bad.

Sambo.

## Practical Discussions

(Continued from Page 20)

tion, your cloth off of the loom will measure about two (2) inches less in width. Therefore the cloth will be close to 38 inches wide. But the best way to prove this is to weave a sample. Designer.

## Answer to Sley.

Editor:

Sley wants to know how to properly use the term "sley" "picks per inch" and "ends per inch." In answer to Sley, will say that each one of these terms have their place and none of them need be confused with the other terms.

"Picks per inch" always refers to the filling and never to the warp. Each pick represents one end driven thru the shed of the warp by the shuttle.

"Ends per inch" always refers to the warp ends per inch in a piece of cloth. Either as it comes from the loom, or after it is finished. That is why it is usually necessary to say ends per inch at the loom or ends per inch finished. Sley should never be used to designate ends per inch. Quite a number of mill men use the term "Sley" in the sense of referring to ends per inch in the cloth, but the term "sley" was never intended to be used for that purpose. The word "sely" is an old English word or term, and was intended to be used only to designate the reed dents per inch. Taking a reed by itself, it has no ends or threads,

therefore, the term ends per inch could not be used in connection with ordering reeds. The term dents per inch is all right, too, in its place, in order to designate the dents or splits per inch. But this does not give us any definite information about the ends per inch of warp to be placed in the reed, because there may be 1, 2, 3 or 4 ends in a dent. Therefore the word sley was intended originally to denote the total numbers of ends per inch in the reed to make a certain width of cloth. But as this is most always an unknown quantity until tried out in all leading mills, where a variety of goods is made, the ends per inch of the warp are always counted at the loom, and also after finishing.

The word sley cuts very little figure as a term after the ends per inch are counted. Some of our leading designers prefer to confine the term "sley" to the ends that a reed will house per inch. Thus: an 80 sley reed will have 40 dents per inch and house two ends in a dent. It will house 80 ends per inch.

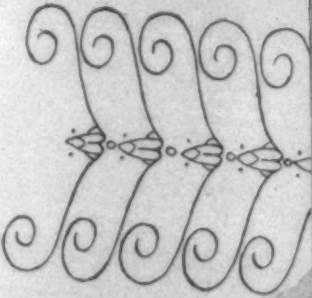
Dent.

## Balsa Wood Lightest.

Balsa Wood is the lightest wood known. It is even lighter than cork. It weighs only 7.3 pounds per cubic foot when new. The Balsa tree flourishes in Ecuador, and it is used in the manufacture of airplanes and life saving equipment. It is said to be as resilient as spruce and pine, but does not chip or split readily, and is difficult to burn.



Thursday, August 19, 1926.



THE INDUSTRIAL FIBRE COMPANY, INC.

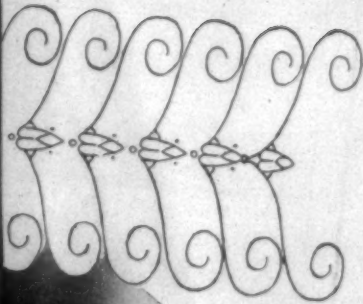
WISHES TO ANNOUNCE THAT IT IS NOW IN

A POSITION TO FURNISH ITS TRADE WITH

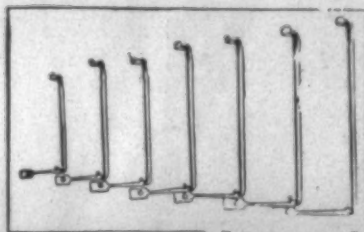
RAYON CONVERTED BY THE WAMSUTTA MILLS

OF NEW BEDFORD, MASS. ON CONES, COPS,

IN THE WARP AND ON BEAMS.



## A Repair Service That Means Something



We Manufacture Flyer Pressers

**Y**OU cannot reduce overhead or increase profits if your machinery is not in condition to function up to 100% capacity. An investment in a thorough overhauling will yield immediate dividends.

Our cotton mill Overhauling and Repair Service is of great value to mill owners because of our long experience in this work in every part of the South. Our name stands for thoroughness and it a guarantee of satisfactory service.

Call on us at any time for overhauling and repair work. No problem is too large or too small for us. Your requirements will receive the specialized attention of skilled, practical men, supported by every facility of modern repair service equipment, amply equal to every demand.

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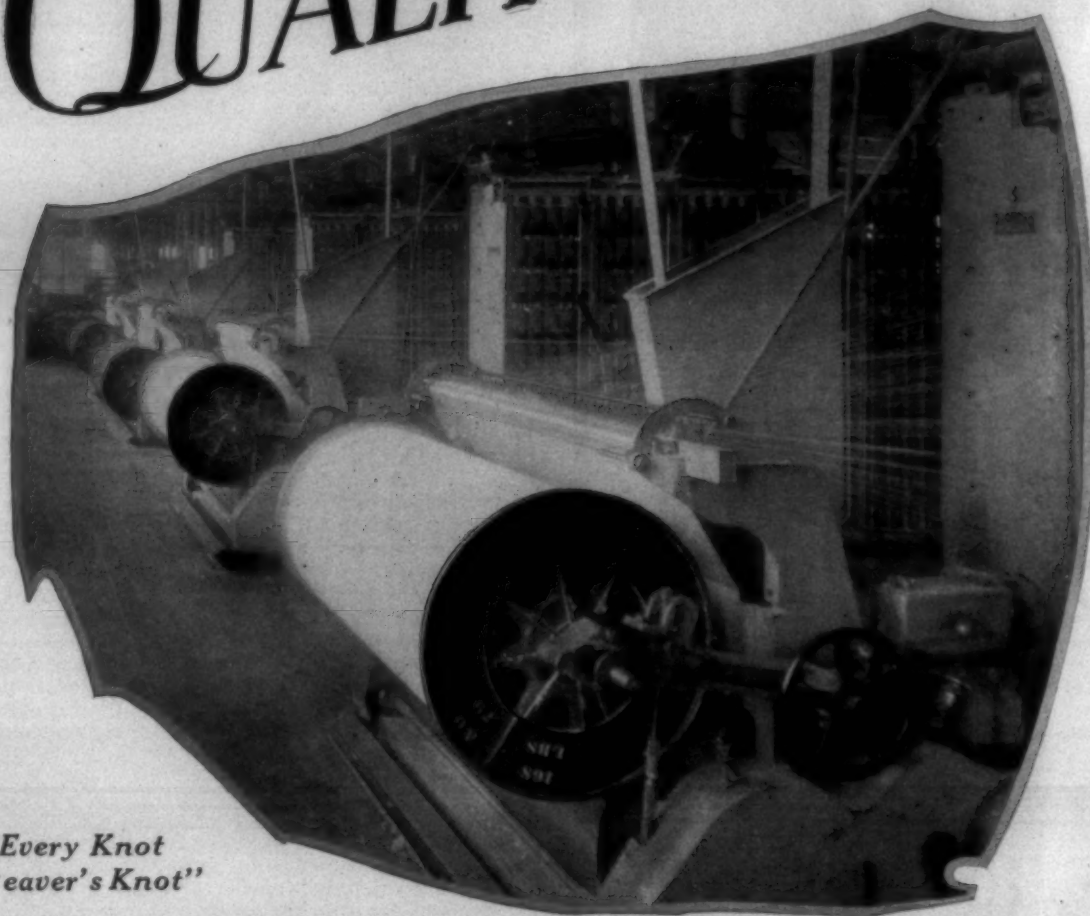
Carolina National Bank Building, Spartanburg, S. C.

Employers' Liability Insurance, Automobile Insurance, Public Liability Insurance

Cash refunds to policyholders, amounting to nearly \$12,000,000 since organization, have realized savings to them of at least 20% of the standard stock company insurance cost.



# QUALITY



*"Every Knot  
a Weaver's Knot"*

**B**Y eliminating strains through carefully thought out design we are able to spool yarn and warp it at speeds heretofore unattained, though quality has not been sacrificed to speed. Yarn spooled and warped the Barber-Colman way reaches the loom tied with Weaver's Knots and with the elasticity that it contained when it left the Spinning Room.

This means better weaving conditions and increased weave room production.

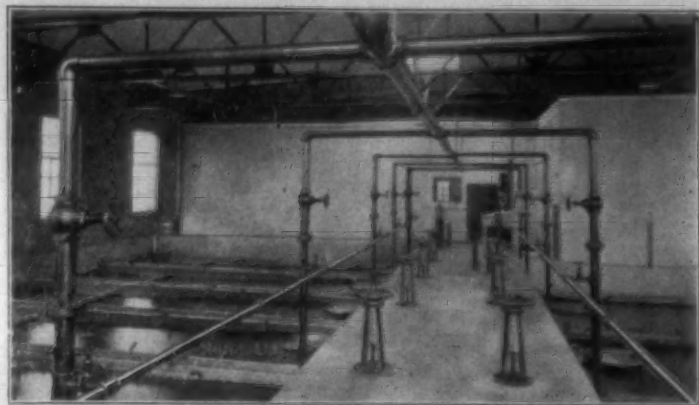
## BARBER-COLMAN COMPANY

GENERAL OFFICES AND PLANT

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## NORWOOD WATER FILTERS

Giving satisfaction from coast to coast  
—always delivering clean, pure, sparkling water.

**Norwood Engineering Co.**  
Florence, Mass.

*Chas. M. Setzer, Southern Representative, Charlotte, N. C.*



Every day in every way  
U. S. gets drier and drier

A score years ago a firm with the  
dough developed a

**PURO-FY-er**



Now everybody's using them.



**The Drinking Fountain  
Par Excellence**

*Ask for Catalog*

**Puro Sanitary Drinking Fountain Co.**  
HAYDENVILLE, MASS.

### Successful American Salesmanship

(Continued from Page 16)

war conflict of extermination between competitors.

The natural characteristic of exportation of manufactured goods as contrasted with raw materials is steadiness. Except when at rare intervals some wholly abnormal event at home or abroad interferes, sudden ups and downs are unlikely. Exports of products of the soil,—raw materials and foodstuffs,—often vary sharply as the result of changes in crop production not only in the exporting country but in foreign importing countries and in competing countries and in export countries.

Production of manufactured goods is in very great measure subject to human control and a country with a large manufacturing industry is always in a position to meet the demands of foreign consumers.

At the same time those demands under normal conditions are quite steady. No sudden new outburst of factory production in importing or competing countries is, in the nature of things, to be expected. A far-sighted, well developed export program comprising carefully selected and diversified outlets can readily be readjusted to meet any momentary lull in a given market, due to some local depression, and can take up the slack elsewhere. Moreover the natural tendency of exports of finished manufactures is to grow. With the gradual improvement of living standard the world demand for them steadily rises unless some world catastrophe supervenes. It grows much faster than the demand for raw materials and more particularly foodstuffs.

This capacity of finished manufactures to serve as a balance-wheel in foreign trade is conspicuously illustrated in recent statistics of the United States. Had it not been for the increase in our exports of this class during the last fiscal year our total export trade would have shown a very marked slump.

The aggregate value of all our domestic exports, other than finished manufactures, fell from \$3,108,000,000 in 1924-25 to \$2,716,000,000 in 1925-26, or by 12½ per cent. This was not due, of course, to any change of an enduring character in our ability to market foodstuffs and raw materials abroad. It reflected chiefly an abnormally poor yield of wheat and rye, and a marked decline in the world price of cotton. All the same this sharp fall would have had a rather serious effect upon our international business relations had it not been in large measure counterbalanced by the increase of 16 per cent in exports of finished manufactures. As it was, our total exports showed a decline of only 2½ per cent.

Going back farther we find that during each of the last four fiscal years a large increase has appeared in the exports of finished manufactures. The successive rates of annual increase beginning with 1921-22 and have been: 15½ per cent, 11½ per cent, 7½ per cent, and 16 per cent respectively. On the

all classes have shown the following other hand our aggregate exports of changes: from 1921-22 to 1922-23 an increase of a bare fraction of 1 per cent; for the next year an increase of 7 per cent; for 1924-25 an increase of 16½ per cent, and for the fiscal year just closed a decrease of 12½ per cent. The contrast between these changes is highly significant.

There is every reason to anticipate a steady increase for the future in American exports of manufactured products. They are bound to become gradually a larger and larger share of our total exports. This is in the natural result of the growing population and increasing industrial development of the country. It is, of course, much to be desired that this country should remain self-sufficient in the supply of basic foodstuffs and raw materials.

The old export predominance of a few concentrated factory centers in the middle Atlantic and northeastern States is no longer in evidence. There is a steadily increasing percentage of many of these export items from other sections—textiles and steel from the South, wood manufactures from the Northwest, Gulf States and around the Lakes, leather goods, agricultural implements and many specialties (particularly those for farm use in Australia, Argentina and South Africa) which come from the middle west, not to mention such widely scattered industries as oil refining and machinery manufactures.

### Cotton Goods Turned Corner

New York.—For the first time in several years there are definite indications that the cotton goods trade has definitely turned the corner. If this expectation is borne out, it will mean the last major industry in the country has joined the big parade of prosperity.

July business is stated by one of the principal mill representatives in the Worth Street district to be 150 per cent of production, the first time in months that sales have materially exceeded output.

Figures compiled by Association of Cotton Textile Merchants show that sales the first two weeks of July exceeded production by 33 per cent. These figures cover 45 standard cotton mill constructions and represent a large percentage of all cotton fabrics.

Production by mills reporting through 36 selling agents totaled 54,904,000 yards, compared with sales of 72,860,000 yards. Stocks of the 45 construction listed totaled 101,291,000 yards, while unfilled orders totaled 121,853,000 yards. Current weekly production is reported at 24,540,000 yards and stocks on hand are only four weeks' production.

Students of the industry believe the trouble the past few years has been not so much lack of demand as slowness of the cotton manufacturer to adjust his business methods to new conditions.

The root of the difficulty lies in the old bug-bear—hand-to-mouth buying by the retailer. The retailer for several years has realized the advantage of a rapid turnover and



has consequently refused to tie up his money in inventories. He passed on the burden to the jobber, who struggled with it and finally passed it on to the mill after two or three failures had resulted due to the changing conditions.

The cotton mills have been disastrously slow about adapting themselves. Under the present state of things, a great mill will be running full time, making money and yet have only two weeks' orders on its books in advance. This was a condition unheard of a few years ago. It all too frequently happened that mills worked until stocks piled up and a surplus accumulated, and then salesmen desperately scoured the trade, begging customers to take the goods at a concession, sacrificing profits to keep their mills running. Naturally the jobber and the retailer relish that state of affairs and encouraged it by not buying unless he got a bargain.

In other words, instead of getting an extra profit for performing an additional service, the mill sold the goods at a loss, although taking extra trouble.

The cotton mills now, however, are solving the difficulty. A few of the weaker and more antiquated mills have been forced to the wall, reducing capacity of the industry. The remainder are becoming used to the new ways of doing business. It means watching stocks very carefully, changing lines more frequently when necessary to meet changing

demands and having the courage and the co-operation to refrain from dumping goods on the market when demand is slack.

The industry has still a long and difficult path to travel, but with guidance of conservative and skillful hands it is headed for prosperity again.

A great deal is heard about inroads made on cotton use by silk and rayon, and of course it is perfectly true that less cotton is used for many things than formerly. Women wear less clothing than they used to, and such things as linings, petticoats, etc., that were once important lines, are now things of the past.

But, however great the changes have been, actual consumption of cotton goods for clothing as well as for industrial uses is steadily increasing. Per capita consumption of cotton cloth in 1923 was 72.5 square yards against 66 square yards in 1914, an increase of about 9 per cent.

It is stated that yardage output of cotton goods by Pacific Mills, makers principally of dress goods, in the past six months was the largest in its history, and the output of American Printing Co., and Windsor print works has also been large.

Any falling off in consumption of cotton dress goods the past few years has been more than made up in increased industrial uses for tire fabrics, automobile upholstery, top coverings and the bag trade. Mills

making tickings and drapery fabrics report business has been excellent. —Boston New Bureau.

### Worth Careful Study

(Asheville Times)

David Clark, Editor of the Southern Textile Bulletin, in his address to the Civitan Club yesterday, made a suggestion for the further development of industries in Asheville that is well worthy of the consideration of business men—a loft building for the accommodation of small industries.

A few years ago, said Mr. Clark, a Charlotte business man erected a loft building and advertised to small manufacturers the rental of floors furnished with water, electricity, and other essentials. The enterprise has proved a success. A number of industries have taken advantage of the opportunity to establish themselves in Charlotte. As the business grew, the proprietors built for themselves larger quarters and the loft rooms were left available for other concerns.

In the event that an industry should fail, the owners of the building would not be involved in loss. But the proposition makes particular appeal to men of some means who wish to establish their own businesses in territory where the natural resources and the nature of the enterprise combine for successful achievement. Moreover, it is a

process of selecting industries that are found desirable from a general community standpoint.

It would be easy to find a number of suitable locations near Asheville for such an industrial building. Its construction would seem to guarantee the certainty of regular payrolls and industries that add in many other ways to the volume of wealth produced without any disadvantages sometimes associated with industrial development.

### Takes 10 Years to Train Cloth Printer.

Of considerable human interest is the story released on Saturday to the consumed-press by the Association of Cotton Textile Merchants of New York, telling how printed cottons are produced.

"The process of printing is so intricate that 10 years' training is required in the development of a qualified printer. His eye must be trained to detect any imperfection in the work as the endless lengths of cloth are whirled through the press."

This is an excerpt from one of the paragraphs. "Most attractive cotton prints which retail for no more than 15 or 20 cents a yard represent an outlay of artistic skill and mechanical ingenuity out of all proportion to their cost," the article concludes.

### Where Your Sizing and Finishing Problems Are Solved

We wish to stress the fact that our service to the Textile Industry begins rather than ends with the sale of merchandise. We pride ourselves upon the large number of leading mills which have found our Research Laboratory a material aid. Call upon us.

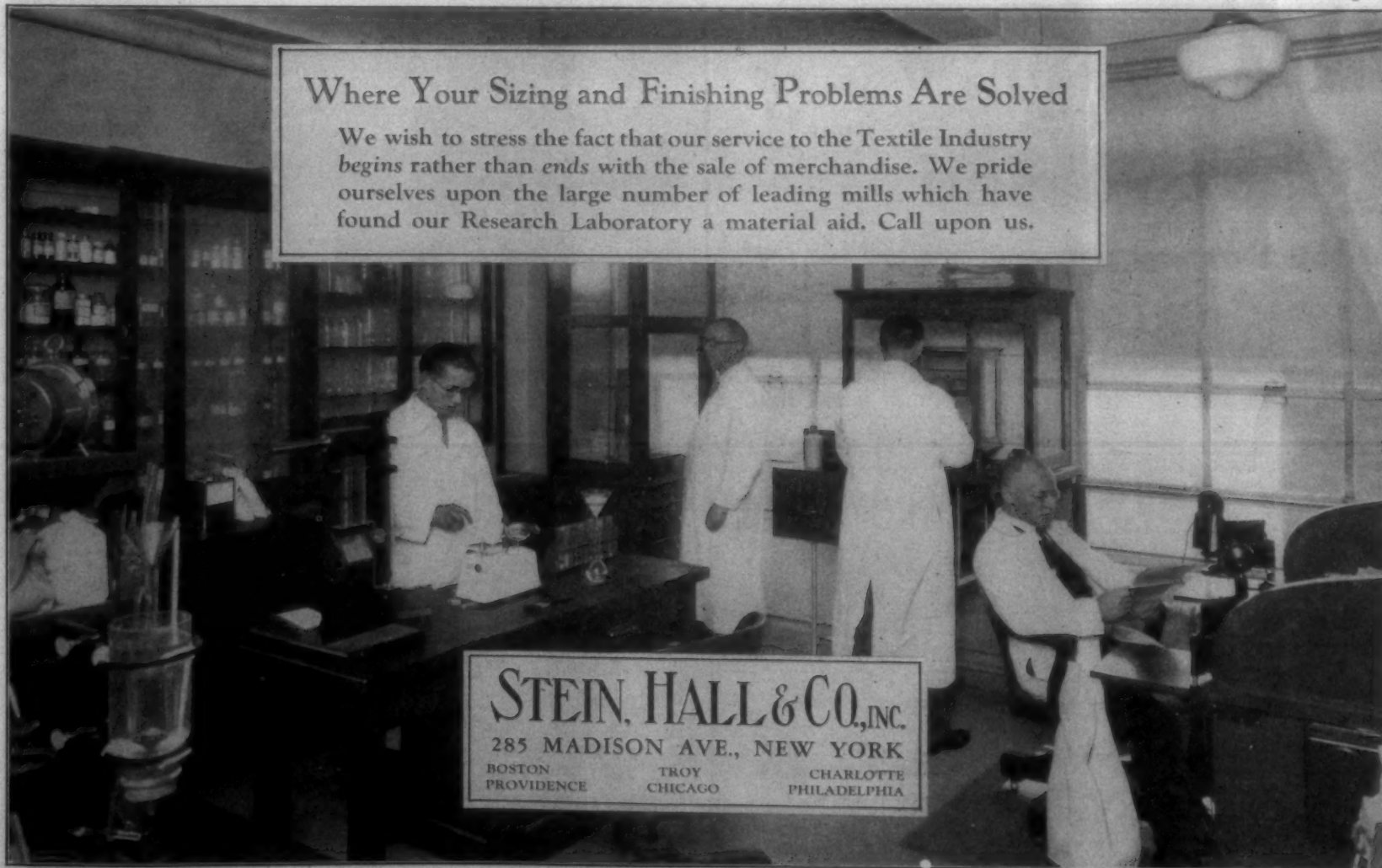
**STEIN, HALL & CO., INC.**

285 MADISON AVE., NEW YORK

BOSTON  
PROVIDENCE

TROY  
CHICAGO

CHARLOTTE  
PHILADELPHIA



## The Adjustable Loom Beam Head That Cuts Production Costs



Experience has proved to Textile Manufacturers that Frank MOSSBERG Corporation Adjustable Loom Beam Heads are the best they can use.

They are guaranteed not to break, bend or warp. Special steel clamp permits quick adjustment on barrel.

### FRANK MOSSBERG CORPORATION

20 Lamb Street

Attleboro, Mass.

ORIGINATORS OF STEEL BEAM HEADS  
LOOM—SECTION—ADJUSTABLE HEADS—TOPBEAMS

Southern Representative: Gibbons G. Slaughter, Charlotte, N. C.

Texas Representative: Gibson Supply Co., Dallas, Texas

## What Could Be Fairer?

We don't ask you to take our WORD for it that

### SPOTSGO

removes grease spots and oil stains from all kinds of material without injuring the fibre. But we would like for you to take a SAMPLE and prove it for yourself.

*There's a Mill Supply Jobber Near You*

**Woodley Soap Manufacturing Co.**

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## A Survey of Fall River

(Continued from Page 15)

and fancier fabrics was imminent, Fall River was not so quick as New Bedford to sense it. When they could afford to do so, the mills did not change their machinery and manufacturing methods to meet the new demands.

In most of the relations, Fall River mills have maintained their isolation. It is said but one unit has a selling office in any city outside of Fall River. The latter is a complete textile unit in itself, with its own cotton brokers and its own cotton goods exchange. The infiltration of ideas from the outside has been hampered in almost every direction.

While recent manufacturing conditions admittedly have been unsatisfactory at Fall River, it is possibly significant that deposits in the city's four savings banks have mounted steadily upward. Some textile workers have doubtless turned to other pursuits. Others, perhaps, have stored away in anticipation of further lean years sums larger than normal. But the savings bank figures would seem to refute any charge of radical depression at Fall River.

In the table below are shown Fall River's savings bank deposits at the end of recent years:

1925	\$52,303,755
1924	50,262,888
1923	48,538,690
1922	43,505,622
1921	39,722,943
1920	36,601,849

A realization of the city's present situation is being shared by Fall River's leading manufacturers. The thinking men are trying to find out what is wrong, and to rectify the errors. Essentially Southern competition is at the root of the city's troubles. But today the South is beginning to feel the pinch of over-expansion of manufacturing facilities and a more co-operative spirit, it is believed, will benefit the Northern and Southern centers alike. In meeting new problems, the North has the advantage of more years' experience than the South. Being the older region, it is accustomed to think in longer cycles. Fall River believes it will find a way out of its difficulties and feels a return of prosperity is nearer than the pessimists will admit.

## Loading Artificial Silk

THE efforts that have been made to treat the artificial silks in some suitable manner either before or during the dyeing process in order to prevent the textile from attaining the excessive glassy luster which generally characterizes them have led to the institution of a number of experiments within recent times which have led to very successful conclusions. All these attempts have been directed to making the artificial silk appear more like the natural silk, by reducing the luster of the former.

Most of the investigations along these lines have been carried out with the aid of aluminum salts alone, or in combination with the

ordinary and the sulphonated vegetable oils. The processes devised have depended on the precipitation of the aluminum salts or the mixture of salts with the vegetable or sulphonated vegetable oil directly on the textile fibre. In most cases this treatment has been carried out after the fibres had first been dyed.

There is no question but that this treatment has the effect of giving the artificial silk fibres a dull appearance. Nevertheless, handle of the textile suffered materially, and the fibers have been changed in such a manner that they tend to stick together, which is of course a very important disadvantage. It is therefore evident that these results do not recommend the process in any way.

Much better results are obtained when barium sulphate is precipitated by suitable means of the textile fibre. The artificial-silk fibres are first put into a lukewarm solution of sulphuric acid containing from two to three per cent of the acid. The materials are passed through this bath a number of times, and then without being washed are entered directly into a bath containing from three to five per cent of barium chloride. There they are allowed to remain for approximately twenty to thirty minutes, until the barium sulphate is completely precipitated on the fibres. The dulling process is now completed, and the artificial silk can be directly dyed. The barium sulphate which has been precipitated on the artificial silk fibres in this manner reduces the high luster of the fibres, which takes on more the appearance of natural silk. One particular advantage of this process is that the dulled fibres can be sized without any difficulty, and the dull luster of the artificial silk is not destroyed by the dyeing operations. Nevertheless, care must be taken to see that the dye liquors that are employed for dyeing these fibres do not contain any sodium sulphate or Glauber's salt, for this salt has the power to react on the barium sulphate that is precipitated on the artificial fibres, with the result that some of this salt is removed, and the artificial silk then loses some of its matt luster. For this reason it is well to carry out the dyeing process without the addition of any salt at all.

The artificial silks which have been deadened by the precipitation of barium sulphate dye in an entirely normal manner, and introduce no difficulties of any sort into the dyeing process. The matt luster is not diminished after dyeing or drying. When the process is carried out on yarns, the products obtained are in perfect condition for weaving, and there are no bad effects introduced into this process by the barium-sulphate treatment. This is entirely the reverse in the case of artificial silk which has been treated with aluminum salts, for then the fibres always have a tendency to stick together, causing all kinds of difficulties in the winding reeling and weaving operations.

The increase in the weight of the artificial silk fibres by the barium-sulphate treatment amounts to approximately three to five per cent.



Experiments which have been made to evolve a process for weighting the artificial silk fibres in order to render their appearance more like that of natural silk have also led to satisfactory results. When the artificial silk fibre is subjected to the tin phosphate-silica loading process, the luster of the fibres is deadened, and the synthetic silk is made to look more like the natural product. At the same time, the weight of the artificial silk is materially increased. For example, it has also been remarked that the resistance of the artificial silk to tension is increased to a greater extent by the mineral loading process than in the case of the natural silk.

Thus, viscose silk of 120 deniers, after being passed three times through baths of tin phosphate and silicate, gained in weight about 185 per cent. On the other hand, an Italian silk of 19 to 21 deniers, when treated in the same manner, showed an increase of only 169 per cent. Similar results have been obtained in treating nitro-silk by means of the tin phosphate-silicate and comparing the results obtained with those secured with Jap silks. While a nitro-silk of 120 deniers, after being thrice treated with the mineral loading agents, gained 182 per cent in weight, the Jap silk, treated under the same conditions, showed an increase of only 161 per cent.

In both cases, the artificial silks, after being treated with tin phosphate-silicate, exhibited very satisfactory properties in the dyeing operations. The artificial silks absorbed the coloring matters with ease, and the after treatments to which they were subjected gave good results, no difficulties of any kind being encountered.—By Walter Bruckhams, ni the Textile Manufacturer.

### Textile Shipments Decline

Washington, D. C.—Value of exports of all classes of textile commodities in fiscal year ended June 30, 1926, aggregated \$1,126,207,000, a decline of \$148,897,000 or 11.7 per cent from preceding fiscal year at \$1,275,104,000.

A decline in shipments of raw cotton during the year accounted largely for the decrease in total exports. Foreign shipments of that commodity, including linters, were 7,991,000 bales, valued at \$917,720,000, while in preceding year they totaled 8,205,000 bales valued at \$1,060,980,000, a decrease of 2.6 per cent in quantity and of 15.6 per cent in value. The latter percentage reflects the drop in price of cotton.

Average export price per pound of cotton declined to \$0.2235 in the last fiscal year from \$0.2514 in year ended in 1925. Exports of raw cotton constituted 81.5 per cent of total value of exports in the textile group in the fiscal year and for 83.2 per cent of the total in previous year.

Europe purchased 86.8 per cent of American cotton shipped abroad in the 1925 fiscal year, but only 81.5 per cent in the last 12-month period, its purchases having dropped from 7,119,000 bales with value of \$922,417,000 in 1925 to 6,510,000 bales worth \$759,167,000 in 1926. Shipments to United Kingdom and Ger-

many showed the largest individual decreases, a fact which can be attributed largely to curtailed operation of cotton mills in those countries. Decline in European purchases of American cotton was largely offset by an increase of 343,000 bales in shipments to the Far East and of 44,000 to Canada.

### Wamsutta Mills Will Convert Industrial Rayon

Boston, Mass. — A development which links one of the best known fine goods mills of New England with a prominent rayon producer has materialized through the conclusion by the Wamsutta Mills, of New Bedford, Mass., of an agreement with the Industrial Fibre Corp., with a plant at Cleveland, Ohio, whereby Wamsutta will act as New England agent for Industrial rayon process and convert this fiber in one of its own plant buildings, and use it in its goods manufacture.

This marks another step in the diversification of a plant which now produces a variety of finished fabrics. Wamsutta products already include sheets and pillow cases, oxfords, lawns, fancies, poplins, yacht ducks and fine yarns.

The arrangement is of interest also because it marks an interesting type of co-operation between a rayon producer and rayon consumer. The devotion of one of the buildings of the Wamsutta Mills to the conversion of industrial rayon means that this plant will be able to supply to the trade the fiber on cops, cones, beams or warps, either bleached or dyed. It also means that the Industrial Fibre Corp., will discontinue its throwing and dyeing plant at Paterson, N. J.

### Bleaching

The Journal of the Textile Institute has recently published a report of an investigation in the scouring losses in the bleaching of cotton, says the bulletin of the National Association of Cotton Manufacturers. These results showed that there was an appreciable difference in the amount lost in the scouring in the different cottons. The American cottons lost approximately 6.5 per cent, South American about 7.0 per cent, Egyptian about 7.5 per cent, native Indian about 8.5 and Arizona Pima about 11.5 per cent. It was found that the greater part of the scouring loss occurred without boiling under pressure. The increase in the temperature of the water from 212 deg. to 320 deg. F. showing only a small additional loss. It is pointed out, however, that it is sometimes necessary to use pressure for the higher temperatures to remove some of the material other than the cotton waxes that it is necessary to take out in bleaching. Loss in weight when scouring with lime was lower than when scouring with sodium hydroxide in an equivalent amount.

The complete paper, which is on file at this office gives additional technical details including the effect of potassium hydroxide, sodium hydroxide, sodium carbonate, sodium borate and sodium silicate.



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## Making, Dyeing and Finishing Worsted in the South

(Continued from Page 12)

roving in order to effect the reduction to the count of yarn necessary, twist the drafted sliver to impart strength and handle to it, and wind the yarn on bobbins for further use. These operations are continuous, the drafting accomplished by rollers and winding-on by spindles.

### Preparation of Warps and Filling.

From the spinning the yarn is run on the large packages through slub catchers, doubled and ready to be twisted in a two-ply yarn. After twisting the warp and filling yarns they are spooled on multiple jack spools and at the same time every last thread is personally examined by a skilled operator who removes any type of imperfection that should appear. The yarn is now ready for preparation of warps and filling.

The patterns are set up for warping and fine silk decorative threads are added to prepare what is known as the warp; they are the ends which travel lengthwise in the cloth. The threads that travel crosswise are known as filling or weft. These warps are then set up in a frame up on which is a set of harness frames containing heddles. Each individual end is passed through a separate heddle in accordance with a draft made out by the designer. There is one place for each end to be inserted and it must be right or it will probably have to be lifted out of the loom and redrawn. The ends are then drawn through a reed fastened in the lay of the loom; its purpose is to beat up each pick of filling inserted and keep the warp to the required width. Before a warp is started in the loom three inches of cloth is woven, taken off and examined carefully by the boss weaver and designer to make sure that the proper yarns, proper pattern and construction is as called for.

When the cloth is removed from the loom it is examined carefully on the face by one examiner and at the same time is what we call through-lighted so any imperfections that appear may be immediately seen. It is important to speed this examination by having an extra man at this position to prevent accumulation of pieces at the perch, especially on making up day. For instance, if a wrong draw would show up in a piece and that piece were left to hang around at the perch, a second piece could carry the same imperfection all the way through and would mean the most of mending two pieces instead of one. Many mills could cut their mending 20 per cent by closer supervision of the examining perch.

The cloth is then passed on to the burlers, who pull the cloth over a flat table and feel for the knots and raise them all to the back of the cloth. If this were not done in a latter operation when shearing the cloth to remove surplus nap the cloth would be cut at every knot.

After the cloth has been burler for knots it is then examined to make sure the burling was properly done. At the same time any imper-

fections showing are marked in chalk and the piece is passed to a skilled mender. If an end is missing or a pick broken this mender, who understands the various interlacings of the different weaves, sews in each missing end or pick. This operation requires good eyesight and extreme patience. The cloth is then re-examined to make sure it is in perfect condition and if not it is returned to the mender to complete.

### Finishing.

The cloth is now ready to be finished. This operation is entirely in accordance with the finish required, but any finish will do as an illustration. The cloth passes through what is known as a continuous crab. This gives quick changes from hot to cold water and gives a desired set to the cloth, preventing crocking and unnecessary shrinkage after the goods are finished. It also sets the cloth to prevent milling streaks, washer breaks, etc., and enables the cloth to take on a uniform finish that it will not do in all cases if not crabbed. In some fabrics it is necessary to perform this operation from two to four times in the course of finishing. The nature of the stock has a lot of control over this operation.

After crabbing the cloth is then put in the fulling mills and run through two-flanged rollers on which is a spring and weight, and with the aid of a good fulling soap and heat caused by the friction the goods are felted to lose a given yardage to produce a desired finish.

After being fulled they are put in the next machine which is the scouring. Here they are run in a warm water of even temperature and additional soap used to work up a good foamy lather. They can also be adjusted to certain tensions, regulated by the adjustable pot eyes through which they pass to enter between two heavy wooden rolls. This operation thoroughly removes all dirt and brings out the decorative silks which add snap and show up the style. From here they are now ready to pass over the vacuum extractor, which removes by suction all surplus water without causing any breaks or wrinkles, as in a revolving or centrifugal extractor. The goods then pass through a massive dryer and are thoroughly dried at a low temperature. This prevents any harshness or harm to the fiber and maintains that natural kind handle which can easily be lost on old-fashioned machinery and careless operation.

After the goods are dried they are brushed so as to remove the nap that has felted down, that it may be easily removed when shearing. The goods, thoroughly brushed and sanded, are trucked to the shears, where they are first sheared on the back to remove the knots that have been raised by the burler. The cloth is usually given two to four runs on the back and four to eight on the face. The shearing removes all the stray fibers and imparts a clean appearance. The cloth is now taken by girls called speckers who look thoroughly over the cloth and with a pair of sharp tweezers remove all specks and straws that appear. The cloth now gets a rest for a day or



two, to come back a little to its own, and is conditioned. It is then run through a large heavy duty press and the finish is finally applied. It is set on rolls for twenty-four hours and goes through a final examination, and if there is anything that shows that would not look desirable, on the lapel of a man's coat an allowance is made by inserting a string in the selvage of the piece and deducting one-eighth yard for each string from the gross yardage.

The cloth is now wrapped on boards and packed and shipped to all parts of the country. These operations are performed by a skilled organization that we feel very proud of. It is composed of 100 per cent white, English-speaking people. There is hardly an operator who does not recall seeing his grandmother take a raw wool and with the aid of the old-fashioned spinning wheel and hand loom convert it into different fabrics for use in their own homes. I have had the pleasure of seeing many of these fabrics and drafts which have been handed down which show remarkable skill. They are a very conscientious people, quick to learn, take great pride in their work and are always willing to co-operate.

### White Seal Rolls

There is much of real practical interest in the thorough demonstration in testing which dyers and bleachers have given to the patented White Seal rolls (made by Rodney Hunt Machine Company) which these finishers have been using for some time in their dye kettles, etc. Every finisher knows how much trouble can be given from rust stain, especially with light colored goods.

The White Seal roll overcomes this and many other troubles because it is a water-tight seal of stainless metal that is positively



The White Seal Roll.

sealed at the end of the roll, and covers up all metal parts. Hence no liquor can get at the gudgeon to cause rusting. At the same time the White Seal keeps the liquor away from the end of the roll, so that it will not get soft and decay, to cause the loosening of the shaft.

The total of these improvements is of far reaching value to finishers of any fabric. It is a fact that this patented construction—the White Seal roll—is capable of always giving very long and satisfactory service, the makers say.

### Less Cotton Consumed in July

Cotton consumed during July totaled 460,918 bales of lint and 61,240 of linters compared with 518,504 and 65,063 in June this year and 483,926 and 63,034 in July last year, the census bureau announced.

Consumption for the year ending July 31 totaled 6,450,987 bales, of lint and 749,992 of linters compared with 7,193,417 and 658,848 for the year ending July 31, 1925.

Cotton on hand July 31, as distributed was as follows:

In consuming establishments, 1,096,521 bales of lint and 144,347 of linters compared with 1,267,796 and 153,842 and 128,916 on July 31 last year.

In public storage and at compresses 1,936,662 bales of lint and 53,548 of linters compared with 2,407,816 and 62,989 on June 30 this year and 514,006 and 28,698 on July 31, last year. In ports totaled 12,090 bales for July and 325,051 for the year ending July 31, compared with 22,137 in June this year, 9,927 in July last year and 313,328 for the year ending June 31, last year.

Cotton spindles active during July numbered 31,082,482 compared with 31,770,900 in June this year and 31,737,346 in July last year.

Cotton consumed during July 334,752 bales and for the year ending July 31st, 4,497,998 bales compared with 365,467 in June this year, 337,040 in July last year and 4,220,101 in the year ending July 31, 1925.

Cotton on hand July 31, in cotton growing States, was distributed as follows:

In public storage and at compresses 1,709,210 bales, compared with 2,169,191 on June 30 this year, and 389,488 on July 31 last year.

### Southern Spinners Bulletin.

The weekly bulletin of the Southern Yarn Spinners Association says:

The Government crop estimate of Monday has had the effect of reducing yarn inquiries and producing temporary stagnation in trading. Prices nominally have suffered a reduction although spinners' prices have been unaffected by the bearish crop estimate. Already the market has begun to recover and inquiries for certain numbers of yarn have again become active.

The effective curtailment maintained by the spinners and the lack of accumulation of stock both in hands of manufacturers and dealers is having a beneficial effect on the yarn market in preventing wide fluctuation of prices incident to the cotton report.

The formation of the Cotton Textile Institute with its wide range of membership we believe is already exerting a beneficial influence on the cotton industry and is largely instrumental in stabilizing conditions.

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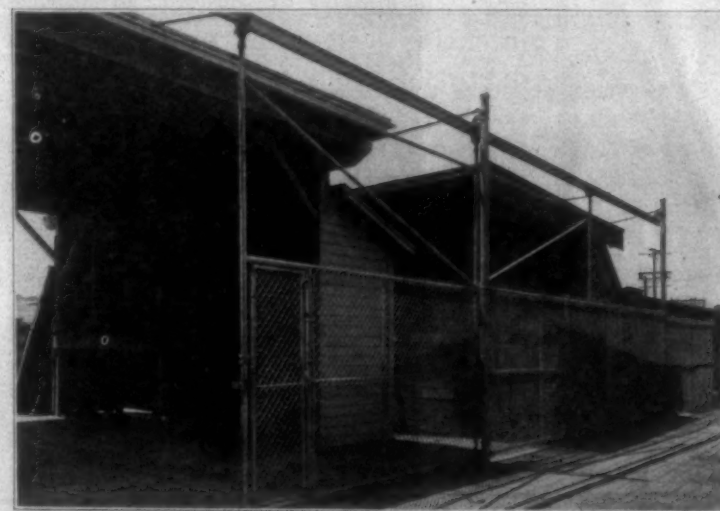
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### Employment in Cotton Goods Industry

Production of cotton goods now employs more people than any other primary manufacturing industry in the United States, according to data compiled by the Association of Cotton Textile Merchants of New York which shows the growth of the cotton textile industry in the last quarter century. On the basis of the latest manufacturing census forty per cent of those engaged in all textile manufacturing are employed in making cotton goods in mills now located in 31 States.

Since the beginning of the present century, the number of spindles in the cotton industry has nearly doubled and the value of the products has increased almost six times to more than \$2,000,000,000.

Due to improvement in mechanical efficiency and better organization of the industry from a manufacturing viewpoint production per operative has shown a marked increase. While actual production is double what it was twenty-five years ago, the number of employees has increased from 302,800 to about 497,000 or 64 per cent. Since 1900 the number of individual cotton cloth mills has increased from 1,005 to approximately 1,600, or about 60 per cent.

Today the amount of capital invested in the cotton manufacturing industry is estimated, at more than \$2,000,000,000, compared with \$339,200,000 at the beginning of the present century, an increase of about 500 per cent. Neither the capital invested in the mills nor the total annual value of the cotton goods manufactured, however, provide an adequate index to the important position which the entire cotton industry occupies in this country.

In addition to the cotton which is actually manufactured into goods, more than half of the American crop is exported for manufacture in foreign mills. The 37,700,000 cotton spindles in the United States, according to Department of Commerce figures. Foreign spindles are dependent to a large extent upon the United States for their supply of raw cotton since the United States produces approximately two-thirds of all the cotton grown in the world.

Numerous by-products of the cotton industry are also of real economic importance. Cotton seed, utilized by industry for widely varying purposes, from feeding cattle to making salad oil and edible fats, was valued last year at the large total of \$241,000,000, a figure which includes also the value of linters. Linters are the fine fibers, clinging to the seed after it is ginned, which are removed to provide material for stuffing mattresses and upholstery, for manufacture into rayon, etc.

As in the packing industry, modern efficiency methods have been developed for the utilization of every scrap of raw material; in the mills even the fine lint that settles upon the floors is scrupulously collected and sold. So-called "cotton waste" has an annual value, according to latest census figures, of approximately \$37,000,000.

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## Draper Corporation Pays Extra Dividends

The directors of the Draper Corp., have declared a cash dividend of \$2 a share, payable October 1, to stock of record August 28. In addition to this dividend a special dividend of \$25 per share on the outstanding stock has been declared payable in cash in two installments; the first installment of \$12.50 a share will be payable October 1 and the second of a similar amount will be payable January 15, 1927. The special dividend is payable to stock of record at the close of business August 28.

The directors, it is reported, propose to change the present capital stock from 175,000 shares of \$100 par value, to 350,000 shares of no par value, by exchanging two new shares for one of the old. A special meeting of the stockholders to ratify this proposed change has been called for September 9 at Portland, Me. If the shareholders at this meeting approve the proposed recapitalization the directors state that in all probability dividends thereafter will be based upon the rate of \$4 per share annually, payable quarterly at the rate of \$1 per share.

Directors of the corporation state that the proposed change in the capital structure of the business will be effected without any capitalization or impairment of any existing surplus or accumulated and undivided profits. The extra cash dividend it is stated is based upon the income and reserves of the corporation made or established over a period of prior years. These reserves it is pointed out were established for contingencies and never appeared in the public balance sheet.

## Consumption of Cotton Goods in Cuba by Classes.

The total importation of cotton manufactures into Cuba during 1924, the latest full year available, amounted to \$28,734,000, of which the United States supplied \$18,155,000 worth and the United Kingdom, \$4,188,000, according to advices to the Department of Commerce from Assistant Trade Commissioner O. R. Strackbein, Habana. In that year, cotton goods accounted for 65 per cent of the total value of United States exports of cotton manufactures to Cuba.

Unbleached and bleached sheetings are the largest single item in the largest trade. Cotton drills probably rank second, and cotton ducks third, with gingham, unbleached filter cloths, voiles, and shirtings following in the order mentioned. In general, Cuban imports from England, France, Spain, Germany Italy are in such lines of cotton goods as are also imported by the United States from those countries. In Cuba, cotton duck is used principally for awnings and sails, cotton drills for men's suits, gingham and voile for women's wear, and filter cloth in sugar mills.

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Spartanburg, S. C., Clinton Cotton Mills, Clinton, S. C., Hermitage Cotton Mills,  
Camden, S. C., Mills Mill, Greenville, S. C., Osage Mfg. Co., Bessemer City, N. C.

## Cotton Goods

New York.—Cotton goods markets were quieter throughout the week as a result of the lower cotton market following the crop report. There was a slight easing in prices of print cloths and sheeting and little buying was reported. Mills on these goods have sold large orders in the past month, however, and have contracts to carry them to September and in some instances, to October.

The demand for finished goods was somewhat better. Many buyers were in the market and the total of business was fairly large, although in most cases individual orders were small. Rayon dress goods and gingham for spring were priced by one large producer at the same level prevailing last season.

Fall business so far placed has been rather conservative, but a good repeat business is expected. Mill production has shown a considerable increase in the two weeks. There has been little change in the export situation, most of the business being done on colored cottons, prints and hosiery.

Buyers in all lines were inclined to move cautiously due to the uncertainty of the cotton situation. Their purchases, however, indicate that they need goods for prompt shipment and are carrying very small stocks. A fair variety of constructions of both sheetings and print cloths sold during the latter part of the week. October deliveries were taken of several sheeting numbers. The bag trade was interested in carload lots, but this was the exception.

Bids of 64x60s at under 7½c; 68x72s, 8½c, and 10c for 80 squares were turned down. Small sales were at full prices. Further quantities of 60x48s sold at 6¼c, smaller lots being held for 6½c. On Thursday spot 80 squares were reported to have sold at 10c, first and second hand. Buyers paid 7 7-16c for 64x56s spots; 5½c for 27-inch 64x60s; 6½c for 6.40 yard.

August 37-inch 4-yard sheetings sold at 9½c. There was inquiry for October for the same quantity at under 8½c. October 6.15-yard off color sold at 5½c, with clean goods held for 5½c lowest. Spot 36-inch 3.50 yard were taken at 11c; 36-inch 5.50-yard September 6½c; 34-inch 5-yard spots (7c; 40-inch 2.85-yard, 11½c; 56x60 4-yard, 9½c. Inquiry and small sales were reported in several other constructions.

Business in cotton duck was rather quiet and sales were below those of the previous week. Prices have been held firm and stocks consider-

ably reduced during the past two weeks. Some of the mills have contracts that will keep them busy through the remainder of the year.

Tire fabrics were better and sales showed an encouraging increase. Several of the tire factories in Akron placed large orders with deliveries running through September and October.

Spot and contract business was done on a small scale in fine goods. Plain staple and fancy constructions were noted in the inquiry. The situation was generally quiet and quotations held firm, sales going through at asking prices. There is some chance to trade, the ability being shown by mills sometimes quoting widely apart on special constructions.

There was trading in combed 128x68s broadcloths at 16¼c and 17c East. A little interest was observed in 120x64s two-ply by single, a very good make being possible at 28c though quoted higher for smaller quantities. The best on 144x76s was 37½c, several quoting up to 41c.

Generally, the mill situation is better than it has been in a long period, and leading sellers feel there is no reason for the cutting of prices but believe that the greatest advantage to all, sellers and buyers alike, will be derived from a policy of holding to last quotations. While cotton growing weather keeps on favorable, the disposition to buy freely is likely to be limited. But, there is also the possibility of unfavorable weather developments, in which event it is believed that buying could be recorded again at close to the last trading prices. Some of the leaders believe that inactivity of two weeks would be followed by more buying, unless cotton dropped off unexpectedly. The situation is one where there is risk attached to being too bearish, and yet there is not the inclination to be bullish.

Cotton goods prices were as follows:

Print cloths, 28-in., 64x64s.	5½
Print cloths, 28-in., 64x60s	5½
Print cloths, 27-in., 64x60s	5½
Gray g'ds., 38½-in., 64x64s	8
Gray goods, 39-in., 68x72s	8½
Gray goods, 39-in., 80x80s..	10½
Brown sheetings, 3-yard...	11½
Brown sheetings, 4-yard...	10
Brown sheetings, stand....	13
Tickings, 8-oz. ....	19½a20
Denims .....	15 a15½
Staple gingham, 27-in....	9
Kid finished cambrics....	8½a 9
Dress gingham .....	12½a16½
Standard prints .....	8

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Extra staples, and good 1 1-16 and 1½ cotton from Arkansas, Oklahoma, and Texas, and Memphis territory.



# The Yarn Market

Philadelphia, Pa.—The adverse effect of the government crop report last week tended to check yarn trading and the week was quiet. Dealers lowered prices on yarn in this market, but spinners held prices up and, as a rule, refused to accept concessions. Southern spinners reflected no weakness in their quotations, according to buyers here who made numerous efforts to secure cheaper yarns.

There has been a better demand for combed and mercerized yarns during the past two weeks and prices have shown slight advances. Many mercerizers have been buying yarns in small quantities lately and their attitude indicates that they have very little stocks. Dealers here have kept prices virtually unchanged, but have eliminated concessions that marked their dealing last month.

Despite the unfavorable week, the general position of the mill is regarded as strong. Experienced yarn men express the belief that if the spinners will continue to curtail and to maintain prices that they will be able to sell sufficient orders to keep them busy through the fall and at prices that will show them a reasonable profit.

The stock situation continues a very favorable factor. Reports from the South show that the mills have little yarn on hand and dealers stocks are admittedly at a low point. In addition, yarn consumers have been buying very sparingly over a long period. Should business with them show improvement or there develop a well defined move toward higher yarn prices it is believed here that spinners would promptly find a much better market.

Prices here were published as follows:

Southern Two-ply Chain Warps.	
8s	29 a.
10s	30 a.
12s	31 a.
14s	32 a.
16s	32 a.
20s	32 a.
24s	32 a.
26s	32 a.
30s	32 a.
40s	32 a.
40s ex.	32 a.
50s	32 a.
Southern Two-ply Skeins.	
8s	28 1/2 a.
10s	29 1/2 a.
12s	30 1/2 a.
14s	31 1/2 a.
16s	31 1/2 a.
20s	31 1/2 a.
24s	31 1/2 a.
26s	31 1/2 a.
30s	31 1/2 a.
40s	31 1/2 a.
40s ex.	31 1/2 a.
50s	31 1/2 a.
Tinged Carpet	
3 and 4-ply	24 a.
White Carpet	
3 and 4-ply	28 a.

Part Waste Insulated Yarn.	
6s, 1-ply	21 1/2 a.
8s, 2, 3 and 4-ply	22 1/2 a.
10s, 1-ply and 3-ply	24 a.
12s, 2-ply	24 1/2 a.
16s, 2-ply	25 1/2 a.
20s, 2-ply	29 a.
26s, 2-ply	33 1/2 a.
30s, 2-ply	35 a.

Southern Single Chain Warps.	
10s	30 a.
12s	30 1/2 a.
14s	31 a.
16s	32 a.
20s	32 1/2 a.
24s	35 a.
26s	35 1/2 a.
30s	37 1/2 a.
40s	48 1/2 a.

Southern Single Skeins.	
6s	25 a.
8s	28 a.
10s	28 1/2 a.
12s	29 1/2 a.
14s	30 a.
16s	30 1/2 a.
20s	32 a.
24s	33 a.
26s	34 1/2 a.
30s	35 1/2 a.
40s	36 1/2 a.

Southern Frame Cones.	
8s	28 a.
10s	28 1/2 a.
12s	29 a.
14s	29 1/2 a.
16s	30 a.
18s	30 1/2 a.
20s	31 1/2 a.
22s	32 a.
24s	33 a.
26s	34 a.
28s	35 a.
30s	34 1/2 a.
40s	48 a.

\* Tying in Southern Combed Peeler Skeins, etc.—Two-ply.

16s	45 a.
20s	47 a.
30s	51 a.
30s	51 a.
36s	55 a.
40s	57 a.
50s	62 a.
60s	68 a.
70s	80 a.
80s	95 a.

Southern Combed Peeler Cones.	
10s	38 1/2 a.
12s	39 a.
14s	40 a.
16s	40 1/2 a.
18s	41 1/2 a.
20s	42 1/2 a.
22s	43 1/2 a.
24s	44 1/2 a.
26s	46 a.
28s	47 1/2 a.
30s	50 a.
32s	51 a.
34s	53 a.
36s	54 a.
38s	55 a.
40s	56 a.
50s	61 a.
60s	68 a.
70s	80 a.
80s	95 a.

Eastern Carded Peeler Thread Skeins—Two-ply.	
20s	66 a.
24s	47 a.
26s	48 a.
30s	52 a.
36s	55 a.
40s	59 a.
45s	66 a.
50s	71 a.

Eastern Carded Cones.	
10s	34 a.
12s	35 a.
14s	36 a.
20s	37 a.
22s	40 a.
24s	44 a.
26s	46 a.
30s	48 a.

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We have opening for an experienced man to grind cards, fix speeders, and look after picker room. Job pays 41 cents per hour, 55 hours a week. Apply J. L. T., care Bulletin.

### Position Wanted

After thirty years' experience in bleaching, dyeing and finishing cotton piece goods, as superintendent of first-class plants, I find myself, owing to financial reverses, willing to accept any responsible position where I can prove my value. Address G. B., care Southern Textile Bulletin.

### Information Wanted

As to whereabouts of Dock Webster, a cotton mill worker, who deserted his wife sometime ago, leaving her with no means of support. Weighs about 140 lbs., blue eyes, light complexion, bald. Thought to be in vicinity of Salisbury, and traveling with woman companion. Please notify Mrs. Armanda Webster, care Springfield Cotton Mill, Laurel Hill, N. C.

### Position Wanted

Party with 26 years experience in textile. Now employed as card room overseer, desires change of location and will consider position as carder and spinner or assistant superintendent. Am I. C. S. graduate, also spent one term in textile school at Raleigh, specializing on grading and stapling. Can give any reference desired. Address B. W. L., care Southern Textile Bulletin.

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One two 70 saw 12-inch double rib huller cotton gin with automatic lint trampler with all belts and other appliances complete. Actual use less than six months—good as new—manufacturers, Gullet cotton gin. Address:

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### Position Wanted

As overseer of spinning, spooling and warping, or spinning, spooling, warping, twisting and beaming. In present position 7 years and can give best of references from my employers. Address G. T., care Southern Textile Bulletin.

### Wanted

Twine Finisher—To take charge of twisting and winding room of 5,00 spindle twine mill.

Must be thoroughly familiar in making Cable Laid, Sea Island, Seine Twine Trot Line, Staging and other specialties. State age, experience, and give references, also salary expected. Permanent position and chance of advancement for the right man who can show results. Address Texas Mill, care Southern Textile Bulletin.

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WANT position as superintendent in yarn mill with 35,000 or 40,000 spindles. Seventeen years experience as superintendent. No. 4921.

WANT position as master mechanic, either electric or steam drive, or superintendent or assistant superintendent. Can furnish best of references. No. 4922.

WANT position as warp tying machine operator. Have had eight years experience on stationary and portable machine on fancy and plain work. References if necessary. No. 4923.

WANT position in charge of winding department, yarn or thread mill. Ten years experience. No. 4924.

WANT position as superintendent in 5,000 to 10,000 spindle mill, or either carding or spinning in large mill. Have had experience on most all grades of cotton from very low Texas to 1 3-16 inch Delta. Best of references. No. 4925.

WANT position as office manager of cotton mill in North or South Carolina. Excellent references. No. 4926.

WANT position as overseer of spinning in mill of approximately 30,000 spindles or less or second hand in large mill. Good references. No. 4927.

WANT position as overseer of weaving, spinning, twisting or warping. I. C. S. graduate. Thirty-two years of age. Twenty years of mill experience. Can give reference.

WANT position as superintendent of either yarn or weave mill. Good references. No. 4929.

WANT position as overseer of weaving on sheetings, drills, duck, print cloth or colored chambray. Have had 18 years practical experience in weave room work. Graduate of I. C. S. course on warp preparation and plain weaving. Good references as to character and ability. Can get both quality and quantity production at lowest cost. No. 4930.

WANT position as overseer of spinning, or both carding and spinning. Forty-two years of age. Have technical education. No. 4931.

WANT position as overseer of carding, or carding and spinning. Good references. No. 4932.

WANT position as overseer of weaving. Will go anywhere in the Carolinas. Have had wide experience in both cotton and art silk, and am good manager of help. Can give good references. No. 4933.

WANT position as roller coverer. Experienced. Good references. No. 4934.

WANT position as overseer of cloth room. Eighteen years experience. Good references. No. 4935.

WANT position as overseer of weaving. Fifteen years experience in all classes of work. No. 4936.

WANT position as overseer of cloth room, designer, weaver or superintendent. Employed as designer and overseer of cloth room on novelty cloths. No. 4937.

WANT position as overseer of carding. Forty-eight years old, and have had twenty years experience as carder. Can furnish good references. No. 4938.

WANT position as overseer carding or spinning. Long experience in both positions and can give satisfactory results.

Can furnish references as to character and ability. No. 4939.

WANT position as overseer of spinning. Good references. No. 4940.

WANT position as overseer of weaving in large mills, or assistant superintendent, or designer on dobby work. 20 years experience as designer and overseer. Can furnish good references. No. 4941.

WANT position as overseer of carding, spinning, spooling, winding or warping. I. C. S. graduate. Age 36. Have had twelve years experience. No. 4942.

WANT position as superintendent. Have had long practical experience. Good references. No. 4943.

WANT position as superintendent of weave or yarn mill, plain, fancy or tire fabric. Have had long experience. Can furnish the very best of references as to my ability and character. No. 4944.

WANT position as overseer of carding. Have been on present job 22 years and overseer 14 years. I. C. S. graduate in carding. Age 42. Can furnish the best of references. No. 4945.

WANT position as superintendent or assistant. Years of experience as superintendent in both yarn and cloth mills, white and colored. Would take position as overseer carding, or carding and spinning. Best of references. No. 4946.

WANT position as superintendent of yarn mill, or overseer carding, spinning or winding. 37 years old. Married. 20 years experience and 9 years as superintendent. Good references. No. 4947.

WANT position as overseer of weaving. Have had 8 years years experience as second hand and 4 years, as overseer on plain weaving, and also on drills and twills and tape selvedge. Can furnish references. No. 4948.

WANT position as overseer of weaving. Experienced on great variety of both plain and fancy weaves. Age 34, married, and can give the best of references. No. 4949.

WANT position as superintendent of medium size yarn mill, or carder in large mill. Have had long experience as carder and spinner and understand both carded and combed yarns. Good references. No. 4950.

WANT position as roller coverer anywhere in Southern States. Can give best of references. No. 4951.

WANT position as overseer spinning, assistant superintendent or efficiency man. Am practical spinner of long experience, good training and education. Good references. No. 4952.

WANT position as overseer weaving. Long experience in weave room, 5 years as second hand on present job. Age 31, married, good habits, I. C. S. graduate in plain weaving. 4953.

WANT position as overseer small card room or second hand in larger room. Have had 27 years experience in card room; 9 years as section man, and second hand. On present job as second hand for 2 years. Age 45, married, sober. Good references. No. 4954.

WANT position as master mechanic or machinist. Reliable man who can give excellent service in machine shop. Good habits, first class references. No. 4955.

WANT position as overseer weaving. Experienced weaver and also have been superintendent of yarn mill. Can come on short notice. Best of references. No. 4956.



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T. C. Entwistle Co.
- Automatic Stop Motion—**  
Eclipse Textile Devices, Inc.
- Automatic Yarn Cleaner—**  
Eclipse Textile Devices, Inc.
- Ball Bearing—**  
Charles Bond Company.
- Balers—**  
Dunning & Boschert Press Co., Inc.  
Economy Baler Co.  
Rex Engineering Corp.
- Baling Presses—**  
Dunning & Boschert Press Co., Inc.  
Economy Baler Co.  
Rex Engineering Corp.
- Bands and Tape—**  
American Textile Banding Co.
- Baskets—**  
Charles Bond Company.  
W. T. Lane & Bros.  
Wickwire Spencer Steel Co.
- Beaming and Warping Machinery—**  
Barber-Colman Co.  
Cocker Machinery & Foundry Co.  
Draper Corporation.  
Easton & Burnham Machine Co.  
T. C. Entwistle Co.  
Saco-Loewell Shops.
- Beam Heads—**  
T. C. Entwistle Co.  
Frank Mossberg Corp.  
Mossberg Pressed Steel Corp.  
Saco-Loewell Shops.
- Beams (Section)—**  
Washburn
- Beams (All Steel)—**  
T. C. Entwistle Co.  
Frank Mossberg Corp.  
Mossberg Pressed Steel Corp.  
Saco-Loewell Shops.
- Beaming Combs—**  
T. C. Entwistle Co.  
Easton & Burnham Machine Co.  
Steel Heddle Mfg. Co.
- Bearings (Roller)—**  
Charles Bond Company  
Hyatt Roller Bearing Co.
- Bearings (Shaft)—**  
Charles Bond Company  
Hyatt Roller Bearing Co.  
William Sellers & Co., Inc.  
Woods, T. B. & Sons Co.
- Bearings (Textile Machinery)—**  
Charles Bond Company  
Hyatt Roller Bearing Company
- Belt Conveyors—**  
Link-Belt Co.  
Wickwire Spencer Steel Co.
- Belt Conveyors (Spiral and Woven)—**  
Wickwire Spencer Steel Co.
- Belt Tighteners—**  
Charles Bond Company  
Link-Belt Co.  
Woods, T. B. & Sons Co.
- Belting—**  
The Akron Belting Co.  
Charles B. Bond Company  
Charlotte Leather Belting Co.  
Druid Oak Belting Co.  
Graton & Knight Mfg. Co.  
E. F. Houghton & Co.  
Edward R. Ladew Co.  
Schachner Leather & Belting Co.
- Belt Cement—**  
Charles Bond Company  
Edward R. Ladew Co.  
Graton & Knight Mfg. Co.  
E. F. Houghton & Co.
- Belt Dressing—**  
Charles Bond Company
- Belt Lacing—**  
Charles Bond Company  
Chicago Belting Co.  
Edward R. Ladew Co.  
E. F. Houghton & Co.  
Graton & Knight Mfg. Co.
- Belting (Link)—**  
Charles Bond Company.  
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Mathieson Alkali Works, Inc.
- Bleacheries—**  
Joseph Bancroft & Sons Co.
- Bleaching Materials—**  
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Arnold, Hoffman & Co., Inc.  
Borne, Scrymser Co.  
L. Sonneborn Sons, Inc.  
National Oil Products Co., Inc.  
Bosson & Lane.
- Seydel Chemical Company,**
- J. B. Ford Co.**  
National Aniline & Chemical Co.  
United Chemical Products Co.  
Wolf, Jacques & Co.  
Bobbin Holders—  
Fournier & Lemoine.
- Bobbins and Spools—**  
American Bobbin Co.  
David Brown Co.  
Courtney, Dana S. Co.  
Draper Corporation.  
Leathershire Spool & Mfg. Co.  
Lowell Shuttle Co.  
Frank Mossberg Corp.  
Mossberg Pressed Steel Corp.  
Walter L. Parker Co.  
Steel Heddle Mfg. Co.
- Boxes—**  
Wilts Veneer Co.
- Box Shooks—**  
Wilts Veneer Co.
- Blowers and Blower Systems—**  
Carrier Engineering Co.  
Parks-Cramer Co.
- Breton Mineral—**  
Borne, Scrymser Co.
- Brushes—**  
Atlanta Brush Co.  
Curtis & Marble Machine Co.
- Brushing Machines—**  
Curtis & Marble Machine Co.
- Bobbin Stripper—**  
Terrell Machine Co.
- Calenders—**  
H. W. Butterworth & Sons Co.  
B. F. Perkins & Son, Inc.  
Textile Finishing Machinery Co.  
Calender Roll Grinders—  
B. S. Roy & Son Co.
- Cards—**  
Saco-Loewell Shops.  
Whitin Machine Works  
Woonsocket Machine & Press Co., Inc.
- Card Clothing—**  
Ashworth Bros.  
Charlotte Mfg. Co.  
Howard Bros. Mfg. Co.  
Wickwire Spencer Steel Co.
- Card Grinding Machinery—**  
Easton & Burnham Machine Co.  
Dronsfeld Bros.  
T. C. Entwistle Co.  
Roy, B. S. & Son Co.  
Saco-Loewell Shops.  
Whitin Machine Works  
Woonsocket Machine & Press Co., Inc.
- Carrier Aprons—**  
Link-Belt Co.  
Wickwire Spencer Steel Co.
- Casting (Special Analysis)—**  
Schrivier Iron Works
- Caustic Potash—**  
A. Klipstein & Co.
- Caustic Soda—**  
Arnold, Hoffman & Co., Inc.  
A. Klipstein & Co.  
Mathieson Alkali Works, Inc.
- Chain Belts and Drives—**  
Charles Bond Company.  
Link-Belt Co.  
Morse Chain Co.
- Chemicals—**  
L. Sonneborn Sons, Inc.  
J. B. Ford Co.  
Hart Products Corp.  
A. Klipstein & Co.  
Mathieson Alkali Works, Inc.  
National Oil Products Co.  
Seydel Chemical Co.  
Seydel-Woolley Co.
- Cleaning Agents—**  
Oakley Chemical Co.  
Woodley Soap Mfg. Co.
- Cloth Presses—**  
Economy Baler Co.
- Clutches (Friction)—**  
Charles Bond Company  
Textile Finishing Machinery Co.  
Woods, T. B. Sons Co.
- Cloth Winders and Doublers—**  
Curtis & Marble Machine Co.
- Clutch Spindles—**  
Fournier & Lemoine.
- Coal Handling Machinery—**  
Link-Belt Co.
- Combs—**  
Steel Heddle Mfg. Co.
- Combs (Beamers, Warpers, Slashers)—**  
T. C. Entwistle Co.  
Easton & Burnham Machine Co.
- Commission Merchants—**  
Catlin & Co.  
The Farish Co.  
J. H. Lane & Co.  
Mauney Steel Co.  
Paulson, Linkroum & Co.  
Ridley Watts & Co.
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Allis-Chalmers Mfg. Co.
- Condensers—**  
Allis-Chalmers Mfg. Co.  
Conditioning Machines—  
American Moistening Co.  
Conduit Fittings—  
Chicago Fuse Mfg. Co.
- Cones (Paper)—**  
Bonoco Products Co.
- Cone Vice Couplings—**  
William Sellers & Co., Inc.
- Conveying Systems—**  
Link-Belt Co.
- Coolers (Air)—**  
See Humidifying Apparatus.
- Cotton—**  
Lesser-Goldman Cotton Co.  
Stewart Bros. Cotton Co.  
S. B. Tanner, Jr.  
Wm. & York Wilson.
- Cotton Machinery—**  
Ashworth Bros.  
Barber-Colman Co.  
Collins Bros. Machine Co.  
Crompton & Knowles Loom Works.  
Dixon Lubricating Saddle Co.  
Draper Corporation.  
Easton & Burnham Machine Co.  
T. C. Entwistle Co.  
Fales & Jenks Machine Co.  
H. & B. American Machine Co.  
Hopdale Mfg. Co.  
Rodney Hunt Machine Co.  
National Ring Traveler Co.  
Roy & Son, B. S.  
Saco-Loewell Shops.  
Southern Spindle & Flyer Co.  
Stafford Co., The  
Terrell Machine Co.  
Tolhurst Machine Works.  
Universal Winding Co.  
Whitin Machine Works.  
Whitinsville Spinning Ring Co.  
Woonsocket Machine & Press Co., Inc.
- Cotton Openers and Lappers—**  
Saco-Loewell Shops.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.
- Cotton Softeners—**  
Arbol Mfg. Co.  
Arnold, Hoffman & Co., Inc.  
Borne, Scrymser Co.  
Bosson & Lane.  
Hart Products Corp.  
E. F. Houghton & Co.  
A. Klipstein & Co.  
National Oil Products Co.  
Seydel Chemical Co.  
Seydel-Woolley Co.  
L. Sonneborn Sons, Inc.  
Wolf, Jacques & Co.
- Cotton Waste Machinery—**  
Saco-Loewell Shops.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.
- Couplings (Shaft)—**  
Charles Bond Company.  
William Sellers & Co., Inc.  
Woods, T. B. Sons Co.
- Cranes—**  
Link-Belt Co.
- Dobby Chain—**  
Crompton & Knowles Loom Works.  
Rice Dobby Chain Co.
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Rogers Fibre Co.
- Doublers—**  
Saco-Loewell Shops.  
Textile Finishing Machinery Co.  
Universal Winding Co.
- Drawing Rolls—**  
Metallic Drawing Roll Co.
- Drink Fountains—**  
Puro Sanitary Drinking Fountain Co.
- Drives (Silent Chain)—**  
Charles Bond Company.  
Link-Belt Co.  
Morse Chain Co.
- Drop Wires—**  
Crompton & Knowles Loom Works.  
Draper Corporation.  
Hopdale Mfg. Co.  
Mossberg Pressed Steel Corp.  
R. I. Warp Stop Equipment Co.
- Dryers (Centrifugal)—**  
Roy, B. S. & Son Co.  
Tolhurst Machine Works.
- Dyeing, Drying, Bleaching and Finishing Machinery—**  
Cocker Machine & Foundry Co.  
H. W. Butterworth & Sons Co.  
Franklin Process Co.  
Perkins, B. F. & Sons, Inc.  
Rodney Hunt Machine Co.  
Textile Finishing Machinery Co.
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Bosson & Lane.  
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A. Klipstein & Co.  
National Oil Products Co., Inc.  
Newport Chemical Works.  
National Aniline & Chemical Co.  
United Chemical Products Co.  
Wolf, Jacques & Co.
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Franklin Process Co.
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General Electric Co.  
Westinghouse Electric & Mfg. Co.
- Electric Hoists—**  
Allis-Chalmers Mfg. Co.  
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- Electric Lighting—**  
Allis-Chalmers Mfg. Co.  
General Electric Co.  
Westinghouse Electric & Mfg. Co.
- Electric Motors—**  
Allis-Chalmers Mfg. Co.  
Charles Bond Company.  
General Electric Co.  
Westinghouse Electric & Mfg. Co.
- Electric Supplies—**  
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Cooper-Hewitt Electric Co.  
General Electric Co.  
Westinghouse Electric & Mfg. Co.
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- Engineers (Ventilating)—**  
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Roberts Fibre Co.
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E. F. Houghton & Co.  
A. Klipstein & Co.  
National Oil Products Co.  
Seydel Chemical Company.  
Seydel-Woolley Co.  
L. Sonneborn Sons Co.
- Finishing Machinery—**  
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- Flat Wall Paint—**  
E. I. du Pont de Nemours & Co., Inc.  
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- Flyer Pressers and Overhaulers—**  
Southern Spindle & Flyer Co.  
Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.
- Flyers—**  
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Southern Spindle & Flyer Co.  
Whitin Machine Works.
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See Clutches.
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Chicago Fuse Mfg. Co.
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Charles Bond Company  
Ferguson Gear Co.
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Charles Bond Company  
Ferguson Gear Co.
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Thomas Grate Bar Co.
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Charles Bond Company  
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- Harness and Frames—**  
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The Bahnsen Co.  
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Parks-Cramer Co.  
R. I. Humidifier & Ventilating Co.
- Humidity Controller—**  
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The Bahnsen Co.  
Carrier Engineering Corp.  
Parks-Cramer Co.  
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- Loom Drop Wires—**  
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- Napper Roll Grinders—**  
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Wickwire Spencer Steel Co.
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Link-Belt Co.  
Morse Chain Co.  
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Woonsocket Machine & Press Co., Inc.
- Pickers and Lappers—**  
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Woonsocket Machine & Press Co., Inc.
- Pinboards—**  
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Washburn.
- Porcelain Guides and Parts—**  
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- Quill Boards—**  
Washburn.
- Quillers—**  
Crompton & Knowles Loom Works.  
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Universal Winding Co.  
Whitin Machine Works.
- Quill Cleaners—**  
Terrell Machine Co.
- Raw Stock Machines—**  
Kaluder Weldon Dyeing Machine Division, H. W. Butterworth & Sons Co.
- Receptacles—**  
Economy Baler Co.  
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Cocker Machinery & Foundry Co.  
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Rodney Hunt Machine Co.  
Frank Mossberg Corp.
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- Ring Spinning Frames—**  
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H. W. Butterworth & Sons Co.  
Collins Bros. Machine Co.  
Fales & Jenks Machine Co.  
Rodney Hunt Machine Co.  
The Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.  
Saco-Lowell Shops.  
Southern Spindle & Flyer Co.  
Textile Finishing Machinery Co.
- Rolls (Metal)—**  
Rodney Hunt Machine Co.
- Rolls (Rubber)—**  
Rodney Hunt Machine Co.
- Rolls (Wood)—**  
Rodney Hunt Machine Co.  
Washburn.
- Roller Bearings—**  
Charles Bond Company.  
Hyatt Roller Bearing Co.
- Roving Cans and Boxes—**  
Denison Mfg. Co.  
Rogers Fibre Co.
- Roving Machinery—**  
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Whitin Machine Works.  
Woonsocket Machine & Press Co., Inc.
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Dixon Lubricating Saddle Co.
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- Sanitary Fountains—**  
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- Scallop Machines—**  
Morrow Machine Co.
- Scouring Powders—**  
Ford, J. B. Co.  
Bosson & Lane.  
National Oil Products Co.
- Scrubbing and Cleaning Powders—**  
The Denison Mfg. Co.
- Sesquicarbonate of Soda—**  
Mathieson Alkali Works, Inc.
- Section Beam Heads—**  
Frank Mossberg Corp.  
Mossberg Pressed Steel Corp.
- Selling Agents—**  
Woodward, Baldwin & Co.  
Deering, Milliken & Co.  
Reeves Bros.
- Selling Agents (Cotton Goods)—**  
Amory, Browne & Co.  
Curran & Barry.  
Deering, Milliken & Co.  
Hunter Manufacturing & Commission Co.  
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Morrow Machine Co.
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A dependable assistant in sizing Cotton Warps

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"The Warps Best Friend"

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### Tempered and Side Ground Card Clothing

TOPS RECLOTHED

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For Prompt Service send your Top Flats to be reclothed and your Lickerins to be rewound to our nearest factory. We use our own special point hardened lickerin wire

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These Products are the Reliable  
Standards of Uniformity De-  
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*and these Stars have a meaning*

—They signify the different grades in which Thin Boiling Eagle Starch is offered to the Textile Industry.

Being the pioneers in the manufacture of Thin Boiling Starches, we are gratified at the widespread recognition they have received.

Be sure to select the grade best suited to your work. Our knowledge and experience are at your service.

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## Textile Mill Drives



5 H. P. Morse Silent Chain Drives from motors to knitting machines. Driver, 870 r. p. m., Driven, 178 r. p. m., 27-inch centers.

Permitting the closer spacing of machines, Morse Textile Mill Drives make for greater production and better working conditions.

98.6% efficient, positive, flexible.

Over 5,000,000 H. P. have been installed in almost every industry and many are still serving after 15 and 20 years of use.

Booklet "A Chain of Evidence from Textile Mills" on request.

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FIG. 20.  
Oblong Basket

**LANE**

**Patent Steel Frame**

**Canvas Mill Baskets**

Combine utmost durability with perfect protection to contents.

Made of extra strong Lane woven canvas with the Lane Patented indestructible spring steel frame with renewable hardwood shoes and cross supporting slats.

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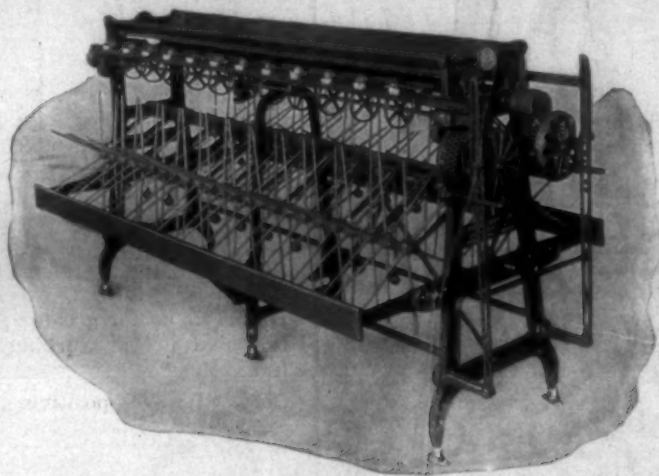
*Originators and Manufacturers of  
Canvas Baskets for 25 years*

**Poughkeepsie, N. Y.**

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Complete Equipment For Manufacturing, Processing and Finishing

The  
Sipp Winder  
for  
Winding Rayon  
and  
Fine Mercerized  
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Machine Co.  
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Also  
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ARTIFICIAL SILK WARP SIZING MACHINES, used by leading manufacturers and recommended by manufacturers of artificial silk, manufactured by CHAS. B. JOHNSON, Paterson, N. J.

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From the Blue Ridge Mountains comes the best oak bark for tanning, which is used exclusively in our tanneries to produce the highest grade leather for belting.

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# SOUTHERN TEXTILE BULLETIN

VOL. 30

CHARLOTTE, N. C., THURSDAY, AUGUST 26, 1926

NUMBER 26

A  
Satisfied  
Customer  
Is--

March 17th, 1926.

Dominion Textile Company, Ltd.,  
10 Victoria Square,  
Montreal, Canada.

Gentlemen:

We have your letter of the 15th instant inquiring in regard to the Bahnson Humidifier.

We have been using this humidifier for about five years and equipped our latest mill entirely with it. We really believe that this is the best humidifying device on the market. It has given us absolutely no trouble and we are very much pleased with the results it has given us. I might add that we also have two mills equipped with the \_\_\_\_\_ system and one with the \_\_\_\_\_ system. Therefore, we have had an opportunity to make practical comparison.

We think if you are in the market for humidifiers, you will make no mistake in buying the Bahnson.

Yours very truly,

\_\_\_\_\_  
Agent

The  
Best  
Advertisement

(Complete copy of this letter may be had upon request)

## The Bahnson Company

Humidification Engineers

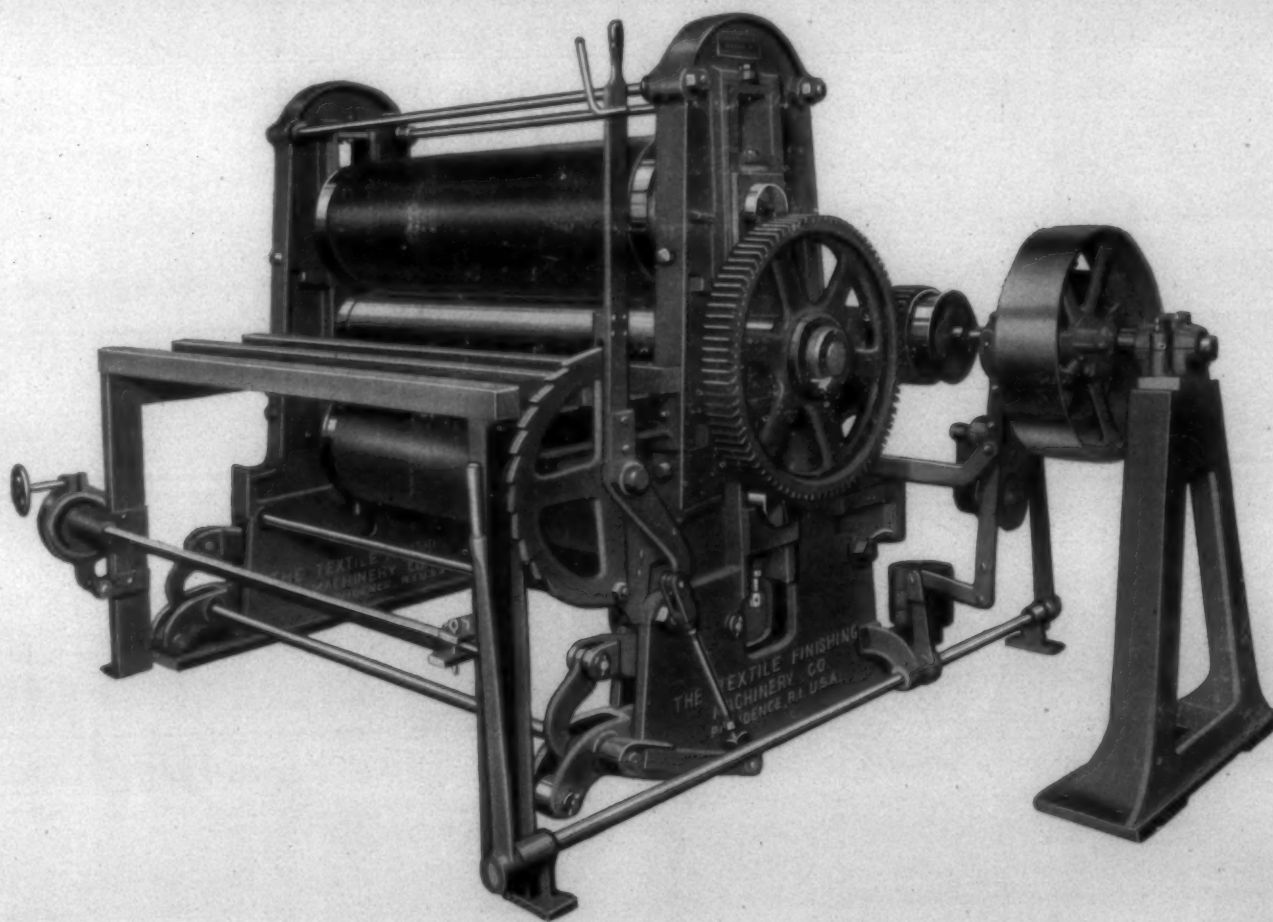
Winston-Salem, N. C.

New York Office: 93 Worth Street

# Three Roll Calender

For All Silk or Rayon and Cotton Goods

Write us about our Special Finishing Range for Rayon and Cotton Fabrics such as Gingham, Shirtings, etc. We will gladly give you any information about this machine or any machine that we manufacture



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TEXTILE-FINISHING  
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Calenders, etc.



## Why An Upstroke?

Because our Upstroke Cleaner opens the cotton without curling, takes out little, if any, good staple with the waste, and takes out more waste than a Vertical Opener. When used with a



Bale Breaker, Upstroke Cleaner, Vertical Opener, and Cleaning Trunk

Vertical Opener or in tandem, this cleaning unit is most successful. Many have been sold by us to meet the stringent demands of today.

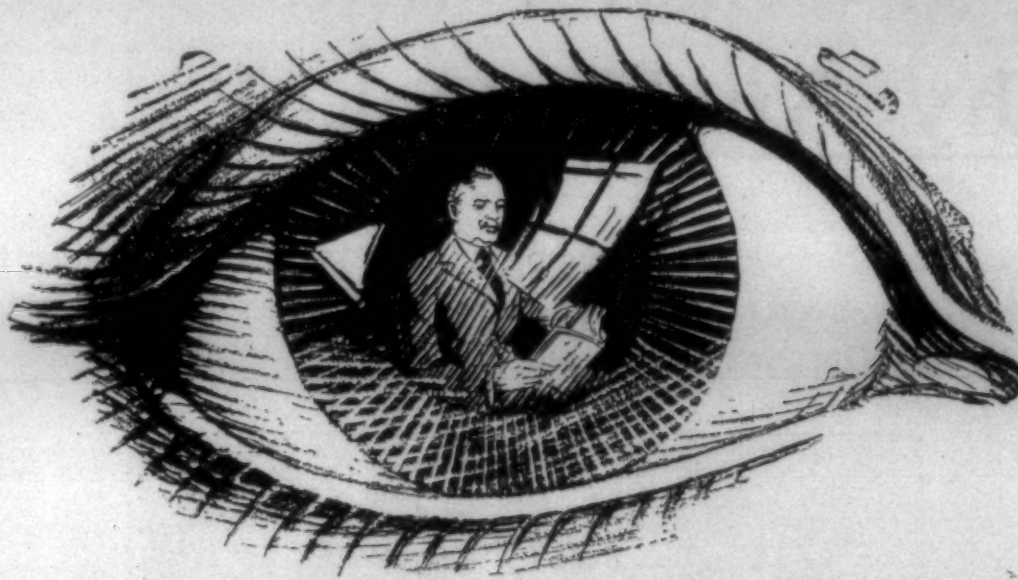
## AT YOUR SERVICE

### WHITIN MACHINE WORKS

Whitinsville, Mass.,  
U. S. A.

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## A trained eye with flawless vision

Continual developments and improvements in your field or branch of industry demand an ever-watchful eye to keep abreast of the leaders. You cannot afford to overlook a single opportunity whether it be a new product, a new method of manufacture or a change in market conditions.

A personal investigation of the ever-changing conditions is a task no individual can attempt,—one that no manufacturer can accomplish successfully.

You require a special organ, a business eye—one that has perfect, undistorted vision, trained for its particular work.

This A. B. P. paper is such an organ. It was created by the needs of its field and owes its success to the service which it renders.

In its pages you find the latest news, the trend of contemporary thought and practice. Whether it be an editorial or an advertisement you can depend on the truthfulness of its statements, for it is pledged to maintain the highest standards of publishing practice.

# A. B. P.

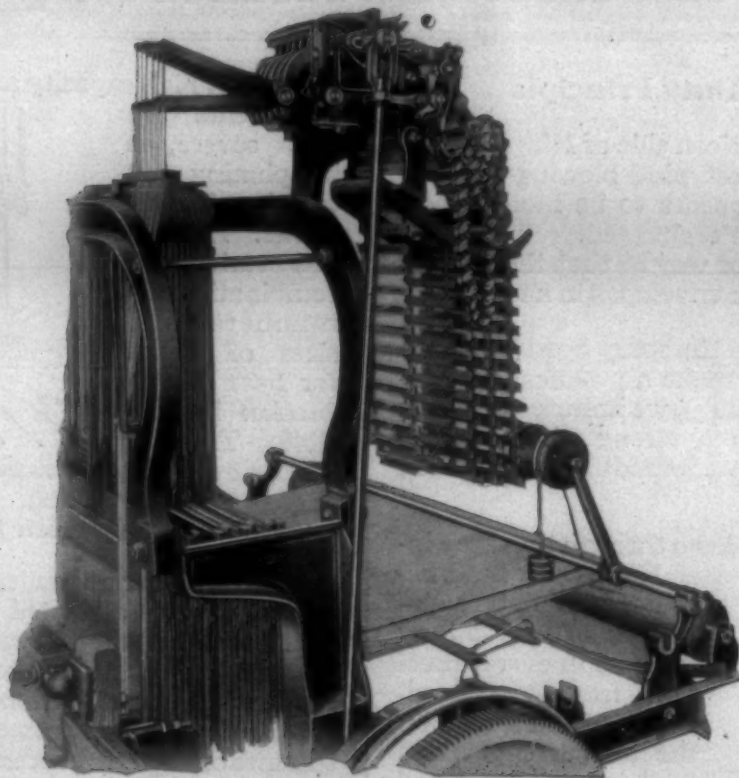
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By *Weaving* your *Name* or *Trade Mark*  
in the selvages of your cloths—

Dobbies built with 12, 20 or 40 harness capacity

OUR EXPERIENCE AND ADVICE ARE AT YOUR DISPOSAL

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S. B. Alexander, Southern Manager, Charlotte, N. C.

# The Economy of Adequate Humidification

## ParkSpray Humidification Means Money for You

### The High Duty Principle

Stand on the American side of Niagara Falls with a brisk northwest wind blowing and you notice that there appears to be more vapor. But the falls haven't changed. The wind carries the vapor your way so that the town of Niagara Falls may be enveloped in a fog.

By adding a fan to the spray head idea (and we were the first to make a practical application of so simple a thing), we imitate Nature at Niagara Falls when a strong wind blows—only in the High Duty humidifier the fan is on top and blows down.

Most of the air is blown through the spray inside the casing. So each High Duty head be-



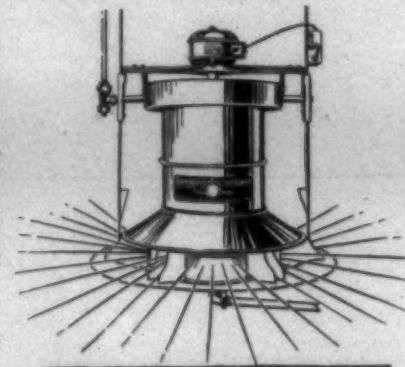
comes a miniature air-washer. The spray radiates in every direction from the head, flattened and spread by the air currents which tend to keep it flat and

down where the work is.

Each ParkSpray High Duty humidifier has an impact spray nozzle within its casing. Below this casing is a drainage pan for the collection and return of unevaporated water which is piped back to a filter tank and recirculated. So far, this is similar to the spray head. It's the fan that makes it High Duty.

The shape and relative positions of the casing and pan are such that only the finest spray escapes. The warm and relatively dry air enters from above and is blown through a sheet of fine spray. The air becomes charged with moisture, and cooled to the wet bulb temperature. It is discharged from the ring opening below at high velocity, in a complete and nearly horizontal circle. The spray is quickly evaporated; the vapor is rapidly and thoroughly diffused over a large area even at the highest humidities. I've seen plenty of ParkSpray HD's working at 94% Relative Humidity with no sign of wetting down.

Units of high capacity are used where the requirements are most severe, as in spinning and twisting departments. An endless variety of combinations in numbers and sizes of heads for *best distribution* is possible. Thus we balance air change and evaporation. And humidification is economical only when these do balance.



In winter, steam under control of a thermostat may be admitted to the filter tank so that the circulated water may be held at any desired temperature. So ParkSpray HD humidifiers—when accompanied by ParkSpray engineering—may become a cooling outfit in summer or a heating accessory in winter.

This type of humidifier serves best where lots of humidity is needed, and where lots of heat needs absorbing—and where there is plenty of height to do it in. Evaporation per unit is much greater than that of the atomizer or the spray head. Its power cost per unit of water evaporated is the lowest yet attained.

The ParkSpray is the original High Duty. Recent refinements in design have further perfected it in efficiency. The quality of the spray is finer and the evaporative capacity is greater than that of any other humidifier of the free moisture type. Cheapest to operate, to maintain, and to look after. But let's leave that for next time.

### Parks-Cramer Company

*Engineers & Contractors*  
*Industrial Piping and Air Conditioning*

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Canadian Agents, W. J. Westaway Company, Ltd.  
Hamilton, Ontario, Montreal, Quebec.

Adequate Humidity means adequate capacity. Capacity means gallons.  
In gallons of water evaporated, ParkSpray equipment is the lowest in price.